JAMECO®
ELECTRONICS

99% In-Stock
Low Price Guarantee
24/7 Service
Hard-to-Find Items

SAME DAY SHIPPING

Essentials for
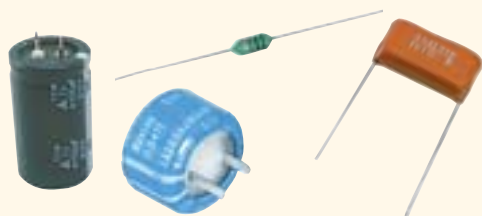Every Project

1-800-455-6119
www.Jameco.com

Integrated Circuits & Transistors of Every Kind

- Over 155 new ICs & Transistors on our website
- Volume pricing for production environments
- Full gamut of CPUs to complex programmable devices to hard-to-find discrete logic and linear ICs

Find them on pages 2-5 & 9.

Broad Selection of Essential Discrete Components

- Available in large and small quantities
- A broad range of semiconductor and passive components
- Call us for OEM quantity pricing and immediate shipping

More on pages 6-9.

Check Out Our New Surface Mount Section

Capacitors
Diodes

Resistors

See our website for our complete selection.

Project Reference Books

We offer many popular titles from handy pocket references to shelf-bending data books and others with complete applications.

The Microcontroller Application Cookbook Volume II

Matt Gilliland's latest edition offers 100% of the recommended daily allowance of practical applications. The book focuses on practical circuits and specific components, leaving theory behind.

NEW

Jameco part numbers referenced in book!

Part No.	Description	1	10
212847	Cookbook Volume II	$29.95	$27.95

The Microcontroller Application Cookbook Volume I

This collection of interface circuits and interface code is an ideal reference for beginners and advanced circuit designers alike.

Part No.	Description	1	10
181681	Microcontroller Cookbook	$29.95	$27.95

Looking for more books? Turn to page 58!

Over 100 New Lamps

NEW

Tired of searching for that hard-to-find incandescent or neon lamp? Our new selection features T-3/4, T1, T1-3/4, T2, T3-1/4, B3-1/2, G3-1/2 and other sizes in wire terminal, pin, bayonet and slide base configurations. Now bulb replacements are easy!

Part No.	Mfr. Cross Ref. No.	Description	Volts (VDC)	Current (A)	MSCP	Pricing 1	10	100
209381	13	G3 $1/_2$ miniature screw	3.7	.30	.98	$.81	$.73	$.65
209402	40	T3 $1/_4$ miniature screw	6.3	.15	.50	.29	.19	.15

See our website for Jameco's latest addition of lamps.

When Things Get Hot Keep Your Cool

With our huge selection of fans we have the perfect fan for every cooling need!

AC Tube Axial Fan

- 115VAC
- 30 CFM
- 12 Watts
- Ball bearing
- 120 mA
- 36 dBA

Part No.	Product No.	1	10	50	100
212601	UF80A12BTH	$13.95	$12.95	$11.95	$10.95

DC Brushless Fan

- 12VDC
- 6.1 CFM
- 0.7 Watts
- Ball bearing
- 60 mA
- 23 dBA

NEW

Part No.	Product No.	1	10	50	100
212679	KDE1245PFB3-H..	$6.95	$4.95	$4.69	$4.39

Find the perfect fan for your application on pages 12 & 13.

Equip Your Workbench

Whether you need a basic DMM, a function generator, scope, bench power supply or other test devices, be sure to check out our test equipment pages. Jameco offers a wide variety of money- saving devices from FLUKE, Wavetek, Metex and more. And if you're looking for great gift ideas, you can't go wrong with these devices for your electronic hobbyist!

Discover a partial selection of test equipment on pages 39-43.

Keep Your Projects Bright

In all different sizes

Jameco offers a broad selection of discrete and 7-segment LEDs. You'll find selections of high intensity and multicolor devices, all at low prices. Need a tall 5" (no, not 0.5") 7-segment display? We've got them in stock for just $34.99!
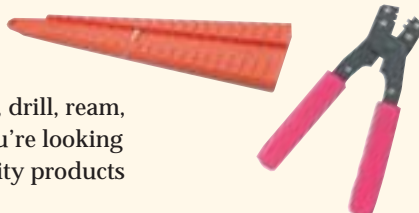
See pages 10-12 for more LEDs and Displays.

Use the Right Tool for the Job

Why risk damaging a project with the wrong or inferior tool? Whether you need to cut, strip, crimp, bend, solder, measure, grip, drill, ream, nibble or glue, you'll find what you're looking for in our tool section. All are quality products at affordable prices.

Tools, Tools, Tools! Go to pages 43 & 44 now!

Affordably Restock Your Parts Supply

Tired of halting a project because you don't have a part in your spare parts collection? On the recommendation of North Dakota engineer Loren Schwab, we put together a wide selection of ceramic and electrolytic capacitors, 1/4 Watt resistors, potentiometers, LEDs, switches, transistors, diodes, spacers and more. To organize the collection, also purchase the 20-drawer component cabinet with labels.

See pages 21-23 for Jameco's selection of Grab Bags and Cabinet Kits.

Your Multimedia Headquarters

Jameco carries all the products you need to back up your critical data, photos and multimedia files.

CD-RW Drive

$84.95

NEW

This drive can operate just like a floppy...write and then re-write data over and over. Great as a back-up system – And since the media is compatible with standard CD-ROM drives, you can send business associates complex design documents.

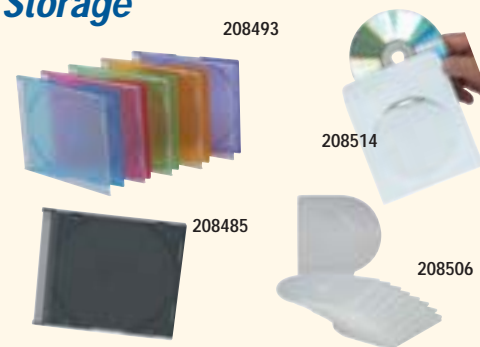| Part No.	Description	1	5
213209	32x12x48x	$84.95	$79.95

CD Media

$14.95 only $.30 each

Buy a 50-pack spindle and save! These 80 minute 24x CD-R disks have a 700MB capacity, and cost only $0.30 each!

Part No.	Description	1	10
198774	50-pack 24x CD-R	$14.95	$13.49

Storage

208493

208514

208485

208506

| Part No.	Description	1	10	50
208514	Paper envelope (25)	$2.49	$2.19	$1.99
208506	Clamshell (10)	3.99	3.59	3.19
208485	Ultra slimline black (10)	3.99	3.59	3.19
208493	Ultra slimline assort. (10)	4.95	4.45	3.95

Drives and Accessories on page 54.

The Essentials Edition from Jameco

To make our catalog even handier, we've selected just the essentials from our huge stock of power supplies, connectors, ICs, tools, test equipment and computer products for inclusion in this edition. If you don't find what you are looking for here don't worry, you'll find our entire line at www.Jameco.com. Log on today!

Handy notes in this catalog, like the one below, will tell you when there are more products available on our website.

26 More @ www.Jameco.com/PS
Jameco's Name Brand Power Products are always 99% In-Stock and at Lower prices.

Digital Power   **Power-One**   **INTEGRATED POWER DESIGNS**
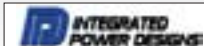
You'll find much, more at www.Jameco.com !

Our Customers Say...

"In ten years of purchasing items online, I have yet to find anyone who comes close to Jameco's equal. You should be proud of all you have accomplished- - - keep up the great work!"

Bryon S., Ohio

Just in Time Stocking Only at Jameco

Take advantage of our "Just in Time" fast delivery. Only Jameco has stocking levels that guarantee 99% in-stock availability! Call any weekday before 6:00 PM EST, and you can be assured you'll have it the next morning.

Don't get Frustrated... Find it at Jameco!

Come to Jameco for popular electronic components, computer products and test equipment at unbeatable prices... You can also find those elusive and frustratingly hard-to-find items, and even some out-of-production parts, too! Join the multitudes of happy Jameco customers... You'll be glad you did.

Our Low Price Guarantee Doesn't Get Much Use...

… And we like it that way. We take our Low Price Guarantee seriously, so we search around the world to identify the sources for the lowest prices for our high-quality products. In fact, we have a team of people dedicated to keeping up to date with our competition and their prices.

Jameco's Low-Price Guarantee
We'll match the advertised price of any like product. It's that simple!

Contact Information

Order Desk – 24/7, 365 Days a Year
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Fax: 1-800-237-6948
sales@Jameco.com

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Customer Service
Phone: 1-800-831-4242
custservice@Jameco.com

Credit Department
Phone: 650-592-8097
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International Toll-Free Fax Numbers
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- **Mexico:** 001-800-593-1449
- **Indonesia:** 1-803-015-237-6948
- **Brazil:** 000-817-455-6119
- **New Zealand:** 080-044-0470

The Jameco Advantage...

Low-Price Commitment

We'll match the advertised price of any like product. It's that simple.

Around-the-Clock Ordering

You can call us at 1-800-455-6119 24x7x365 to place your order. Or visit us on the web at http://www.Jameco.com.

Same Day Shipping

99% of orders placed by 6 PM EST are shipped the same day.

The Color Code Legend...

For easy reference we have included this color code legend on every page.

Part Number Color Code Legend
Sale **Returbished** **Closeout**

Different Types of Opportunities

Our sale products are highlighted in **yellow** which usually signifies 10% to 60% off!

A **green** part number identifies refurbished/out-of-production products that Jameco delivers to you at terrific prices.

Part No.	Product No.
25101	MC146818

A **blue** part number indicates products that are being phased out due to lack of supply. You probably have one last chance to buy at a reduced price.

Part No.	Product No.
155643	DC603F1

P R I C E S

Prices are effective 10-21-02.
Prices and discounts are subject to change without notice.

Have you logged onto our website lately?

http://www.Jameco.com

We're constantly updating our selection of products to make it the most appropriate for your needs. If you can't find what you're looking for, search our website for additional products not listed. Look in this catalog for specific URL listings to make your search quicker and easier.

Call for pricing on quantities over 100 – we carry major manufacturers.   We will special order any IC – 100 Piece Minimum

TO-3 package — 2 or 4-pin
TO-92 package — 3-pin
TO-220 package — 3 or 5-pin
DIP package — 8, 14 and 16-pin

Linear Series
172 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pkg.	Description	1	10	100
120723	LM12CLK	TO-3/4	80W op amp.	$29.95	$27.95	$25.95
107094	LM34CZ	TO-92	Prec. F temp. sensor (-40˚F to +230˚F)	5.95	5.39	4.95
107107	LM35CZ	TO-92	Prec. C temp. sensor (-40˚C to 110˚C)	5.95	5.39	4.95
33195	TL072CP*	DIP-8	Low noise JFET dual op amp.	.39	.35	.29
33216	TL074CN*	DIP-14	Low noise JFET quad op amp.	.55	.45	.39
33267	TL084CN*	DIP-14	JFET-iput quad op amp.	.55	.45	.39
23392	LM301N*	DIP-14	Improved op amp.	.39	.35	.29
23464	LM308N*	DIP-8	Precision op amp.	4.49	3.95	3.59
23528	LM311N*	DIP-8	Voltage comparator	.35	.25	.19
23608	LM318N	DIP-8	Precision hi-speed op amp.	.69	.59	.49
23632	LM319N	DIP-14	Hi-speed dual comparator	.75	.65	.55
23683	LM324N**	DIP-14	Low power quad op amp. (ULN4336)	.29	.25	.22
23721	LM331N	DIP-8	Prec. volt to freq. converter (150ppm/°C)	2.95	2.75	2.49
23851	LM339N**	DIP-14	Quad comparator	.29	.25	.22
23966	LM358N*	DIP-8	Low power dual op amp.	.29	.25	.19
24088	LM383T	TO-220/5	7-watt audio high power amp.	5.95	5.39	4.95
24281	LM393N*	DIP-8	Dual comparator	.35	.29	.25
23000	LF398N	DIP-8	Sample and hold circuit	1.69	1.49	1.29
23026	LF412CN*	DIP-8	Low offset drift JFET input dual op amp.	1.35	1.01	.71
27422	LM555CN**	DIP-8	Timer (MC1455P/NE555V)	.29	.26	.23
126797	LMC555CN*	DIP-8	CMOS 555 timer	.54	.49	.44
24328	LM556N*	DIP-14	Dual 555 timer (MC3456P)	.49	.45	.39
24352	LM565N	DIP-14	Phased locked loop	1.49	1.29	1.19
24395	LM567V	DIP-8	Tone decoder	.49	.45	.39
27490	NE571N	DIP-16	Compander, subscriber	3.29	2.99	2.69
24539	LM741CN**	DIP-8	OP. amp. (ULN2151)	.29	.25	.19
24563	LM747CN	DIP-14	Dual 741 op amp.	3.95	3.59	3.25
23131	LM1458N*	DIP-8	Dual op amp. (RC4558)	.29	.26	.22
23157	LM1488N*	DIP-14	Quad line driver RS232 (75188)	.29	.25	.22
23181	LM1489N*	DIP-14	Quad line rec. RS232 (75189)	.29	.25	.22
23270	LM1875T	TO-220/5	20-watt power audio amp.	2.25	1.95	1.75
107140	LM1881N	DIP-8	Video synchronous separator	2.75	2.49	2.25
34278	ULN2003A*	DIP-16	Hi-volt/curr. darl. transistor array	.39	.35	.29
156566	LM2574N-5	DIP-8	Step-down 5-voltage regulator	2.49	2.19	1.95
39589	26LS31	DIP-16	Quad diff line driver	.79	.69	.62
39600	26LS32	DIP-16	Quad diff line receiver	.59	.44	.34
34315	ULN2803A*	DIP-18	Hi-volt. hi-curr. darl. transis. array	.69	.59	.49
23296	LM2901N	DIP-14	Quad comp.	.39	.29	.20
23350	LM2917N-8	DIP-8	Frequency to volt converter	2.45	1.75	1.25
107182	LM2940CT-5	TO-220/3	5V low dropout reg. (max. 45Vin)	1.29	1.19	1.09
12183	CA3130E	DIP-8	CMOS op. amp.	1.19	1.09	.99
12204	CA3140E	DIP-8	Bi-MOS op amp.	.79	.59	.42
12239	CA3161E	DIP-16	BCD to 7-segment decoder driver	2.19	1.95	1.75
24168	CA3401N	DIP-14	Quad amp (LM3900N) (221-235)	.79	.69	.62
24230	LM3914N	DIP-18	Bar-graph display driver	2.25	2.02	1.82
24256	LM3915N	DIP-18	3 dB steps bar-graph disp. driver	1.99	1.79	1.54
27385	NE5532*	DIP-8	Dual low noise op amp	.69	.59	.49
51879	8038CCPD	DIP-14	Precision wave form generator	3.49	3.25	2.95
50964	75176	DIP-8	Differential bus transceiver	.89	.81	.69
51131	75492	DIP-14	Hex digit driver (492)	6.95	6.25	5.95

*10 pieces in Linear kit, below   **20 pieces in Linear kit, below

Linear Series IC Cabinet Kit

Get a total of 480 pieces comprised of 40 different ICs and save big! Includes 20-drawer component cabinet with drawers dividers and adhesive labels for labeling.

SAVE $51

Part No	Description	See page 23 for kit details	1	10
84988	480 pcs. Linear IC cabinet kit (some of 40 types noted by */**)		$189.95	$169.95

Analog Devices
More @ www.Jameco.com/IC

Part No.	Product No.	Pins	Description	1	10	50
115158	AD558JN	16	Microprocessor compat. 8-bit DAC	$17.95	$12.75	$12.11
115174	AD620AN	8	Low cost instrument amplifier	17.95	15.95	14.35
115182	AD633JN	8	Low cost analog multiplier	12.95	9.69	7.69

MAXIM Type Interface Series
More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
142535	MAX202CPE	16	+5V RS232 trans. requires 0.1µF caps	$2.49	$2.25	$2.05
24811	MAX232CPE	16	+5V powered, dual RS232 transmitter/ receiver (0°C to +70°C) SP232ACP	2.19	1.75	1.45
106147	MAX232CWE◆	16	+5V powered, dual RS232 (SOIC) trans./rcvr	1.95	1.75	1.59
106155	MAX232EPE	16	+5V powered, dual RS232 transmitter/receiver (-40°C to +85°C)	2.49	2.25	2.05
106163	MAX233CPP	20	+5V powered, multichannel RS232 drivers/receivers (no ext. components)	5.75	5.18	4.66
106171	MAX235CPG	24	+5V powered, five RS232 transmitter/ receiver (no ext. components)	9.95	8.95	8.05

◆ Surface mount

7400 Series
63 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
48979	7400**	14	Quad 2-input NAND gate	$.69	$.62	$.45
49015	7402*	14	Quad 2-input NOR gate	.59	.49	.45
49120	7407**	14	Hex buffer/driver (O.C.)	.59	.49	.45
49146	7408*	14	Quad 2-input AND gate	.69	.59	.48
49728	7417*	14	Hex buffer/driver (O.C. hi-voltage)	.79	.59	.41
50593	7476	16	Dual JK flip-flop with preset and clear	1.19	1.09	.99
50631	7483	16	4-bit binary full adder	.89	.79	.69
50745	7493	16	4-bit binary counter	1.49	1.34	1.19
49883	74189	16	64-bit RAM tri-state (DM8599N)	3.59	2.69	1.89
49912	74192	16	Decade up/down counter with clear	3.95	3.59	3.25
49955	74194	16	4-bit bi-directional shift register	1.39	1.25	1.15
88225	SDLD001A	—	Texas Instruments TTL Data Book	34.95	31.49	29.95

*10 pieces included in 7400 kit below   **20 pieces included in 7400 kit below

7400 Series IC Cabinet Kit
Get a total of 350 pieces comprised of 30 different ICs and save big! Includes 20-drawer component cabinet with drawers dividers and adhesive labels for labeling.

SAVE $52

Part No.	Description	See page 22 for kit details	1	10
84953	350 pcs. 7400 series IC cabinet kit (some of 30 types noted by */**)		$139.95	$125.95

74C Series
More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
44222	74C00	14	Quad 2-input NAND gate	$.69	$.55	$.39
44231	74C04	14	Hex inverter (CD4069)	.74	.52	.48
44564	74C922	18	16-key keyboard encoder (INS8245N)	6.75	5.95	4.95
44572	74C923	20	20-key keyboard encoder (INS8246N)	6.75	5.45	4.59

Voltage Regulators
More @ www.Jameco.com/IC

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Cross Ref.	Pkg.	Description	1	10	100
23579	LM317T**	TO-220/3	1.5A adj. pos. reg. (1.2V-37V)	$.49	$.44	$.39
23667	LM323K	TO-3/2	5V 3A positive reg.	3.95	3.59	3.25
192284	LM338T	TO-220/3	5A adjustable regulator	2.59	1.95	1.45
24467	LM723CN*	DIP-14	Voltage regulator (2V-37V)	.39	.35	.29
51182	78L05**	TO-92	5V 100mA pos. voltage regulator	✳	.27	.24
51203	78L12*	TO-92	12V 100mA pos. voltage regulator	✳	.26	.23
192233	78M05	TO-220/3	5V 500mA pos. voltage regulator	.35	.31	.27
192241	78M12	TO-220/3	12V 500mA pos. voltage regulator	.35	.32	.28
51262	7805T**	TO-220/3	5V 1A pos. voltage reg. (LM340T-5)	.35	.32	.28
51431	79L12	TO-92	12V 100mA neg. voltage regulator	.28	.25	.23
51457	7905T*	TO-220/3	5V 1A neg. voltage regulator	.39	.35	.29
51481	7912T*	TO-220/3	12V 1A neg. voltage regulator	.39	.35	.29

*10 pieces in Linear kit, left   **20 pieces in Linear kit, left

Call for pricing on quantities over 100 – we carry major manufacturers.   **We will special order any IC – 100 Piece Minimum**

74LS Series
87 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
46252	74LS00**	14	Quad 2-input NAND gate	$.31	$.28	$.24
46287	74LS02**	14	Quad 2-input NOR gate	.29	.25	.21
46316	74LS04**	14	Hex inverter	.29	.26	.23
46341	74LS05*	14	Hex inverter (O.C.)	.34	.30	.27
46367	74LS07	14	Hex buffer/driver (O.C. hi-voltage)	.99	.89	.79
46375	74LS08**	14	Quad 2-input AND gate	.36	.31	.29
46404	74LS10*	14	Triple 3-input NAND gate	.29	.26	.23
46439	74LS11*	14	Triple 3-input AND gate	.31	.28	.25
46640	74LS14*	14	Hex inverter Schmitt trigger	.29	.26	.23
47095	74LS20*	14	Dual 4-input NAND gate	.35	.28	.25
47458	74LS30*	14	8-input NAND gate	.29	.22	.20
47466	74LS32**	14	Quad 2-input OR gate	.29	.26	.23
47693	74LS38	14	Quad 2-input NAND gate buffer (O.C.)	.34	.26	.18
47790	74LS47*	16	BCD to 7-seg. decoder/driver (O.C.)	.99	.89	.79
47992	74LS73*	14	Dual JK flip-flop with clear	.49	.45	.39
48004	74LS74**	14	Dual D flip-flop	.29	.25	.22
48021	74LS75*	16	4-bit bi-stable latch	.55	.45	.39
48071	74LS85*	16	4-bit magnitude comparator	.35	.29	.25
48098	74LS86*	14	Quad EXCLUSIVE-OR gate	.35	.31	.27
48119	74LS90*	14	Decade counter	.49	.45	.39
48151	74LS93*	14	4-bit binary counter	.89	.79	.70
46480	74LS123*	16	Dual mono. multivibrator with clear	.35	.29	.25
46501	74LS125*	14	Quad bus buffer neg. enable tri-state	.39	.29	.21
46607	74LS138**	16	3 to 8 decoder/demultiplexer	.35	.31	.27
46623	74LS139*	16	2 to 4 decoder/demultiplexer	.36	.27	.19
46703	74LS151*	16	8-bit input multiplexer	.39	.35	.31
46738	74LS154	24	4 to 16 line decoder/demultiplexer	2.49	2.25	2.05
46754	74LS155*	16	Dual 2/4 demultiplexer	.39	.35	.32
46771	74LS157*	16	Quad 2/1 data selector	.29	.25	.22
46931	74LS174*	16	Hex D flp-flop with clear	.29	.25	.17
46957	74LS175*	16	Quad D flip-flop with clear	.35	.31	.27
47010	74LS192	16	Decade up/down counter with clear	3.95	3.59	3.25
47036	74LS193*	16	Binary up/down counter with clear	.59	.49	.45
47141	74LS240*	20	Octal invert. line driver tri-state	.44	.33	.23
47167	74LS241	20	Octal bus/line driver tri-state	.39	.29	.19
47175	74LS243	14	Quad transceiver tri-state	.22	.20	.18
47183	74LS244*	20	Octal driver tri-state	.44	.39	.35
47212	74LS245*	20	Octal bus transceiver tri-state	.45	.39	.35
47386	74LS273*	20	Octal D-tyoe flip-flop with clear	.45	.39	.35
47600	74LS373*	20	Octal D flip-flop tri-state	.45	.39	.35
47634	74LS374*	20	Octal D F/F edge-trig tri-state	.45	.39	.34
47669	74LS377	20	Octal D register common enable	.53	.40	.34
47722	74LS390	16	Dual 4-bit decade counter	.49	.44	.39
47861	74LS540	20	Octal invert. buffer/line driver tri-state	.59	.53	.47
47870	74LS541	20	Octal buffer/line driver tri-state	.69	.59	.49
64418	74LS573	20	Octal D-type F/F latch tri-state	1.49	1.35	1.19
47984	74LS688	20	8-bit magnitude comparator	1.09	.89	.69

*10 pieces in 74LS kit below   **20 pieces in 74LS kit below

74LS Series IC Cabinet Kit

SAVE $37

Get a total of 420 pieces comprised of 35 different ICs and save big! Includes 20-drawer component cabinet with drawers dividers and adhesive labels for labeling.

Part No.	Description		1	10
		See page 23 for kit details		
84961	420 pc. 74LS series IC cabinet kit (some of 35 types noted by */**)		$119.99	$107.99

IC Test Clip Series

- For temporary connections to DIP package components
- Heavy-duty spring loaded hinge provides positive contact
- 20 AWG insulated gold contacts
- Color: white

22103

Part No.	Cross Ref.	Description	1	10	25
22103	JTC16	16-pin (for 8, 14 and 16-pin ICs)	$6.95	$6.25	$5.59
22120	JTC20	20-pin (for 18 and 20-pin ICs)	8.95	6.50	5.35
22162	JTC28	28-pin	10.95	9.95	8.95

74HC Series
78 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
45161	74HC00	14	Quad 2-input NAND gate (6231581)	$.25	$.22	$.19
45188	74HC02	14	Quad 2-input NOR gate	.19	.17	.14
45794	74HC32	14	Quad 2-input OR gate	.22	.19	.16
46130	74HC74	14	Dual D flip-flop	.35	.32	.29
45541	74HC192	16	Decade up/down counter with clear	1.59	1.49	1.39
45612	74HC240	20	Octal inverting line driver tri-state	.49	.45	.39
45655	74HC244	20	Octal driver tri-state	.45	.39	.29
45831	74HC373	20	Octal D-type flip-flop tri-state	.45	.39	.35
46050	74HC541	20	Octal buffer/line driver tri-state	.69	.55	.35
46084	74HC574	20	Octal D-type flip-flop tri-state	.59	.44	.31
46105	74HC595	16	8-bit serial-to-parallel shift reg. tri-state	.79	.69	.45

74HCT Series
More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
44871	74HCT00	14	Quad 2-input NAND gate (Y560820T)	$.29	$.25	$.19
44898	74HCT04	14	Hex inverter	.29	.22	.16
44901	74HCT08	14	Quad 2-input AND gate	.25	.19	.12
44935	74HCT14	14	Hex inverter Schmitt trigger	.39	.35	.29
45057	74HCT32	14	Quad 2-input OR gate	.34	.26	.18
45137	74HCT74	14	Dual D flip-flop	.33	.25	.18
44927	74HCT138	16	3-to-8 decoder/demultiplexer	.29	.25	.22
63773	74HCT139	16	2-to-4 decoder/demultiplexer	.29	.25	.22
88057	74HCT154	24	4-to-16 decoder/demultiplexer	1.59	1.49	1.39
45014	74HCT240	20	Octal inverting line driver tri-state	.49	.37	.26
45022	74HCT244	20	Octal driver tri-state	.39	.29	.19
45031	74HCT245	20	Octal transceiver tri-state	.45	.33	.23
45049	74HCT273	20	Octal D-type flip-flop with clear	.39	.35	.31
45065	74HCT373	20	Octal D-type flip-flop tri-state	.49	.45	.29
45073	74HCT374	20	Octal D-type flip-flop edge-trig. TS	.49	.39	.29
99303	74HCT541	20	Octal buffer/line driver tri-state	.69	.59	.39
45090	74HCT573	20	Octal D-type latched flip-flop tri-state	.69	.49	.34
45102	74HCT574	20	Octal D-type flip-flop edge-trigger tri-state	.69	.52	.36
45129	74HCT688	20	8-bit magnitude comparator	.69	.59	.49

CD4000 Series
52 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
12562	CD4001**	14	Quad 2-input NOR gate	$.29	$.24	$.21
12634	CD4011**	14	Quad 2-input NAND gate	.29	.24	.21
12677	CD4013**	14	Dual D flip-flop with set/reset	.35	.25	.22
12706	CD4015*	16	Dual 4-stage static shift register	.39	.35	.31
12722	CD4016*	14	Quad bilateral switch	.29	.25	.22
12749	CD4017*	16	Decade counter/divider	.39	.35	.31
12802	CD4020*	16	14-stage binary/ripple counter	.55	.49	.44
12845	CD4023*	14	Triple 3-input NAND gate	.29	.23	.17
12853	CD4024*	14	7-stage binary counter	.39	.35	.31
12950	CD4040*	16	12-stage binary/ripple counter	.39	.35	.29
13055	CD4049**	16	HEx/buffer/converter (inverting)	.29	.24	.21
13071	CD4050*	16	Hex/buffer/converter (N-inverting)	.29	.26	.23
13098	CD4051*	16	Single 8-channel multi./demultiplexer	.45	.39	.35
13231	CD4069*	14	Hex inverter (74C04)	.29	.26	.23
13258	CD4070*	14	Quad EXCLUSIVE-OR gate (74C86)	.29	.26	.23
13354	CD4081*	14	Quad 2-input AND gate	.25	.19	.17
13493	CD4511*	16	BCD to 7-seg. latch/decoder/driver	.69	.59	.49
13581	CD4520	16	Dual binary up counter	.49	.45	.35
13653	CD4538*	16	Dual precision monostable multivibrator	.59	.53	.48
13709	CD4553	16	3-digit BCD counter	2.95	2.75	2.49

*10 pieces in CD4000 kit below   **20 pieces in CD4000 kit below

CD4000 Series IC Cabinet Kit

SAVE $31

Get a total of 300 pieces comprised of 25 different ICs and save big! Includes 20-drawer component cabinet with drawers dividers and adhesive labels for labeling.

Part No.	Description		1	10
		See page 23 for kit details		
84970	300 pc. CD4000 series IC cabinet kit (some of 25 types noted by */**)		$79.95	$71.95

Call for pricing on quantities over 100 – we carry major manufacturers.   **We will special order any IC – 100 Piece Minimum**

EPROM

52 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description		1	10	100
40002	2716	24	2k x 8	16kB 450ns (25V)	$3.99	$3.59	$3.19
40011	2716-1	24	2k x 8	16kB350ns (25V)	6.49	5.89	5.39
39706	27C16	24	2k x 8	16kB 450ns (25V) CMOS	7.25	6.55	5.99
40096	2732	24	4k x 8	32kB 450ns (25V)	6.49	5.99	5.49
40109	2732A-20	24	4k x 8	32kB 200ns (21V)	6.49	5.99	5.49
40192	2764-20	28	8k x 8	64kB 200ns (21V)	5.25	4.75	4.29
40248	2764A-25	28	8k x 8	64kB 250ns (12.5V)	3.49	3.15	2.85
105304	27C64-12	28	8k x 8	64kB 120ns (12.5V) CMOS	6.49	5.99	5.49
39829	27C64-15	28	8k x 8	64kB 150ns (12.5V) CMOS	5.49	4.99	4.49
74608	27C64-20	28	8k x 8	64kB 200ns (12.5V) CMOS	4.69	4.29	3.79
39933	27128-25	28	16k x 8	128kB 250ns (21V)	5.95	5.35	4.79
87935	27C128-12	28	16k x 8	128kB 120ns (12.5V) CMOS ..	4.49	3.99	3.59
39677	27C128-15	28	16k x 8	128kB 150ns (12.5V) CMOS ..	4.29	3.85	3.45
40037	27256-15	28	32k x 8	256kB150ns (12.5V)	5.49	4.99	4.45
140476	27C256-70	28	32k x 8	256kB 70ns (12.5V) CMOS ...	5.95	5.39	4.85
112740	27C256-10	28	32k x 8	256kB100ns (12.5V) CMOS	5.75	5.25	4.49
65904	27C256-12	28	32k x 8	256kB120ns (12.5V) CMOS ...	5.25	4.75	4.29
39714	27C256-15	28	32k x 8	256kB150ns (12.5V) CMOS ...	4.95	4.49	4.05
40168	27512-25	28	64k x 8	512kB250ns (12.5V)	3.79	3.45	3.15
175206	27C512-90	28	64k x 8	512kB 90ns (12.5V) CMOS	7.95	6.95	6.25
118148	27C1024-15	40	64k x 16	1024kB150ns (12.5V) CMOS ...	4.75	4.39	3.95
39669	27C010-20	32	128k x 8	1024kB200ns (12.5V) CMOS ...	4.75	4.39	3.95
78852	27C020-12	32	256k x 8	2048kB120ns (12.5V) CMOS ...	7.29	6.69	5.99
127933	27C4096-12	40	256k x 16	4096kB120ns (12.5V) CMOS ...	6.95	5.25	4.99
111780	27C040-10	32	512k x 8	4096kB100ns (12.5V) CMOS ...	6.95	6.25	5.65
102293	27C040-12	32	512k x 8	4096kB120ns (12.5V) CMOS ...	8.49	7.49	6.75
156275	27C080-10	32	1M x 8	8192kB100ns (12.5V) CMOS ...	16.95	14.95	13.95
140003	27C080-12	32	1M x 8	8192kB120ns (12.5V) CMOS ..	17.49	15.99	14.49

See EPROM programmers on page 31

EPROM Accessories

More @ www.Jameco.com/IC

Part No.	Cross Ref.	Description		1	10
66042	DE1	UVP portable EPROM eraser, pg 31		$64.95	$58.95
15712	DE4	8-chip UV-EPROM eraser, pg 31		129.95	117.95

EEPROM

15 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description		1	10	100
108847	24C04P	8	512 x 8	4096-bit serial (CMOS)	$.89	$.79	$.69
74691	28C16A-25	24	2k x 8	16k 250ns (5V) CMOS	4.95	4.49	4.05
74827	28C64A-25	28	8k x 8	64k 250ns (5V) CMOS	4.49	4.05	3.65
74878	28C256-25	28	32k x 8	256k 250ns CMOS	8.75	6.85	6.05

PROM

13 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
27781	N82S129	16	256 x 4 1024-bit PROM tri-state (27S21)	$7.95	$6.95	$6.25
48717	74S288	16	32 x 8 Tri-state (27S19/TBP18S030N)	4.95	4.49	4.05

GAL

7 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
39167	22V10-25	24	25ns 132 x 44 AND array Lattice	$3.99	$3.49	$3.09

Static RAM

16 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description		1	10	100
38957	2114N	18	1k x 4	450ns (9114BPC)	$2.25	$1.99	$1.79
38973	2114N-2	18	1k x 4	200ns (9114EPC) (U214D20)	2.49	2.25	2.05
38981	2114N-2L	18	1k x 4	200ns low power	2.49	2.25	2.05
42198	5101	22	256 x 4	450ns (CMOS)	7.99	7.19	6.49
42930	6264P-12	28	8k x 8	120ns (64kB) CMOS	2.65	2.39	2.15
85121	6264LP-70	28	8k x 8	70ns (64kB) LP CMOS	3.39	2.99	2.49
42884	6264LP-10	28	8k x 8	100ns (64kB) LP CMOS	3.16	2.85	2.55
82472	62256LP-70	28	32k x 8	70ns low power CMOS	5.49	4.99	4.49
42833	62256LP-10	28	32k x 8	100ns low power CMOS	3.95	3.59	3.25
42850	62256LP-12	28	32k x 8	120ns low power CMOS	4.29	3.86	3.49
75037	ATT7C199P-15	28	32k x 8	15ns high speed CMOS (.3"W)	3.39	2.99	2.69
131810	628128LP-70	32	128k x 8	70ns low power CMOS	8.95	7.79	6.99
157358	628512LP-70	32	512k x 8	70ns low power CMOS	19.99	17.99	16.19

Flash Memory

12 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	50
74835	28F020-15	32	256k x 8 150ns (12V) CMOS	$7.95	$7.15	$6.45

ATMEL AT89C Series

More @ www.Jameco.com/IC

Part No.	Product No.	Pins	Description	1	10	100
168874	AT89C2051-24PC	20	8-bit MCU, 24MHz 2kb flash memory	$3.75	$3.49	$3.19
168891	AT89C51-20PC	40	8-bit MCU, 20MHz 4kb flash memory	4.25	3.84	3.49
168938	AT89C52-24JC	44	8-bit MCU, 24MHz 8kb flash mem. PLCC	4.95	4.49	3.95

CPUs/MPUs

28 more @ www.Jameco.com/IC

Part No.	Description	MHz	Socket	1	10	25
118421	486 speed doubler (Intel), 80486DX2	66	168/PGA	$19.95	$17.95	$16.15
130833	Pentium® processor	133	296/PGA	29.95	26.95	24.25
130841	Pentium® processor	166	296/PGA	54.99	49.99	46.95
189296	Pentium® processor	200	296/PGA	69.95	62.95	56.65
140054	Pentium MMX® processor	200	376/PGA	49.95	37.45	26.25
150501	Pentium MMX® processor	233	376/PGA	69.95	62.95	54.95
200395	Celeron® processor	500	Socket 370	79.95	71.95	64.75
190060	Pentium® II processor with heat sink	233	Slot 1	89.95	79.95	72.95
151651	Pentium® II processor	300	Slot 1	109.99	99.99	89.99
183100	Pentium® II processor	400	Slot 1	124.99	109.99	99.99
192751	Athlon, A0750MPR24B	750	Slot A	129.95	116.95	105.25

Dynamic Video RAM

9 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
41339	4116-15	16	16k x 1 150ns (MM5290J-1R)	$.99	$.89	$.80
128688	HM514260	SOJ	256k x 16 70ns	3.39	2.99	2.69

5000 Series

6 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	50
32803	TCM5089N	16	Integrated tone dialer chip	$4.95	$4.49	$4.05

6500 Series

More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
43166	65C02	40	MPU with internal clock (CMOS)	$6.95	$6.25	$5.65
43254	6522	40	VIA (versatile interface adapter) 1MHz	2.39	2.15	1.94

6800 Series

16 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
43481	6800	40	8-bit MCU	$6.95	$6.25	$5.65
43502	6802	40	8-bit MPU with clock and RAM (1MHz)	8.69	7.82	6.99
132484	MC68HC705C8S	40	8-bit HCMOS MCU, 8k bytes, EPROM	38.95	34.95	31.55

8000 Series

53 more @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
51844	8031	40	CPU with 128 x 8 RAM and I/O	$3.29	$2.99	$2.69
102197	8032	40	8-bit MCU 256 x 8 RAM	3.95	3.59	3.25
51991	8051AP**	40	MCU w/128x8 RAM (book P/N 161402, pg 58) ..	5.49	4.99	4.49
125647	80C52BASIC	40	CPU 8-bit CMOS with basic interpreter	19.95	17.95	16.15
51705	80C85	40	CPU 8-bit N-channel (3MHz)(CMOS).................	6.95	6.29	4.59
52142	8088	40	CPU 16-bit (8-bit data bus) 5MHz	2.49	1.59	1.39
52708	8254	24	Prog. interval timer (UPD71054)	4.49	3.99	3.59
52724	8255	40	Prog. peripheral I/O (PPI) 71055 (2MHz)	4.49	3.99	3.49
52732	8255A-5	40	Prog. peripheral I/O (PPI) 5MHz	5.49	4.99	4.49
52425	82C55A-5	40	Prog. peripheral I/O (PPI) CMOS (5MHz)	4.49	3.99	3.49
52759	8256	40	Multif. universal asynch. rec./trans.	19.99	17.99	15.99
52871	8284A	18	Clock gen. and driver (UPD71084)	4.49	3.99	3.59
52978	87C51	40	CPU w/ 4kx8 EPROM & 128x8 RAM(3.5-12MHz)	21.99	19.99	17.99

** Tie pin 31 low to bypass the internal ROM

9000 Series

More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
53663	9368	16	FND70 driver/latch	$4.49	$3.95	$3.55
10567	AM9513APC	40	System timing controller	39.95	32.95	29.65

MOTOROLA Type Series
More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
24942	MC1350P	8	Video IF amp (12V operation)	$1.29	$1.19	$1.09
25216	MC3479P	16	Biphase stepper motor driver	5.75	5.18	4.65
25232	MC3486P	16	Quad EIA-422/423 line rec. w/ 3-state outputs	.59	.49	.45
25259	MC3487P	16	Quad EIA-422 line driver w/ 3-state outputs	.69	.62	.55
25275	MC4044P	14	Frequency phase detector (11C44)	9.99	8.99	8.19
25064	MC14490P	16	Hex contact bounce eliminator	6.95	6.25	5.59
118586	MC145151P	28	Parallel input PLL freq. synthesizer	5.95	5.39	4.85
25101	MC146818	24	Real time clock plus RAM	4.95	4.49	4.05

DALLAS SEMICONDUCTOR Semiconductor
12 more @ www.Jameco.com/IC

Part No.	Product No.	Pins	Description	1	10	100
133410	DS1216C	28	Smartwatch/RAM 64K/256k	$26.95	$24.25	$21.95
114278	DS1225AB-150	28	64k nonvol. SRAM 5%pwr, 4.62V WP	15.95	12.95	8.75
177113	DS1230Y-100	28	256k nonvol. SRAM 10%pwr, 4.37V WP	19.99	17.99	15.99
176778	DS1302	8	Trickle charge time keeping IC	2.49	2.25	2.05
114374	DS1387	24	RAMified real time clock 4kx8	9.95	8.95	8.05
114382	DS1620	8	Digital thermometer and thermostat	5.49	4.95	4.45

MICROCHIP CMOS PIC Microcontrollers
29 more @ www.Jameco.com/IC

Part No.	Product No.	Pins	Conf.	Speed (MHz)	EPROM Bits	RAM Bytes	I/O Lines	1	10	100
145040	PIC12C508-04/P	8	OTP	4	512 x 12	25	5	$1.89	$1.59	$1.29
134172	PIC16C56-RC/P	18	OTP	20	1k x 12	25	12	3.75	3.49	3.25
193447	PIC16F628-20/P	18	Flash	20	2k x 14	224	16	3.25	2.92	2.63
145111	PIC16F84-04/P	18	Flash	4	1k x 14	68	13	5.95	5.35	4.75
145120	PIC16F84-10/P	18	Flash	10	1k x 14	68	13	7.95	7.19	6.49
193332	PIC16F84A-20/P	18	Flash	20	1k x 14	68	13	5.95	5.35	4.82
193367	PIC16F876-20/SP	28	Flash	20	256 x 8	368	22	8.19	7.37	6.63
176882	PIC16F877-20/P	40	Flash	20	256 x 8	368	33	9.49	8.49	7.49

HOLTEK Remote Control Decoders

Part No.	Product No.	Pins	Description	1	10	100
126607	HT648L	24	Decoder 10-bit address / 8-bit latch data	$3.29	$2.99	$2.69

UARTs
More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
27596	NS16550AN	40	Univ. asynch. rcvr./trans. w/ FIFO (PC16550DN)	$5.95	$5.39	$4.85

A/D Converters
More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
10153	ADC0804LCN	20	8-bit A/D converter (1 LSB)	$2.69	$2.39	$2.09

Harris/Intersil Type Series
More @ www.Jameco.com/IC

Part No.	Cross Ref.	Pins	Description	1	10	100
43756	7107CPL	40	3 1/2-digit LED single-chip A/D converter	$2.99	$2.69	$2.39
51140	7555IPA	8	CMOS timer (LM555CN)	.59	.49	.45
51879	8038CCPD	14	Waveform generator/volt control OSC	3.49	3.25	2.95

Microcontrollers

80C52-BASIC Microcontroller

The 80C52-BASIC chip is a custom-masked 80C52 microcontroller with a full-featured 8k-byte ROM-resident BASIC-52 interpreter.

Hardware: • On-chip oscillator and clock circuit
• Operates DC to 12MHz • 256 x 8-bit RAM
Software: • Full BASIC interpreter in ROM on a single chip
• "Stand-alone" software development
• Interrupts can be handled by BASIC or Assembly Language

Part No.	Product No.	Description	1	10	100
125647	80C52BASIC	CPU 8-bit CMOS w/ BASIC interpreter	$19.95	$17.95	$16.15

ISD Voice Chips

Single-Chip Voice Record/Playback Devices
10 to 120 Second Durations (28-pin DIP)

107334

• Easy-to-use single-chip voice recording and playback
• Manual switch or microprocessor controllable
• Directly cascadable for longer durations
• Fully addressable to handle multiple messages • On-chip clock source
• Zero-power message storage – eliminates battery backup circuits
• Single voltage operation: +5V (4.5V to 5.5V operating range)
• Automatic power-down (push-button mode) • 100k record cycles (typical)
• Playback can be edge or level-activated • 1 μA standby current (typical)
• 100-year message retention (typical) • On-chip automatic gain control (AGC)

Part No.	Product No.	Description	1	10	50
141671	ISD1110P	Voice record/playback (10 sec.)	$4.95	$4.49	$3.95
107334	ISD1420P	Voice record/playback (20 sec.)	5.95	5.39	4.95
120643	ISD2560	Voice record/playback (60 sec.)	9.95	8.95	7.95
120660	ISD2590	Voice record/playback (90 sec.)	9.95	8.95	7.95
141655	ISD25120P	Voice record/playback (120 sec.)	9.95	8.95	7.95

e-lab Digital Interface ICs
More @ www.Jameco.com/IC

Stepper Motor Controllers
Designed to interface a logic level input byte to a stepper motor.

Part No.	Product No.	Pins	Description	1	10	50
141532	EDE1200	18	Unipolar stepper motor controller	$8.95	$7.95	$6.95
157526	EDE1204	18	Bipolar stepper motor controller	8.95	7.95	6.95

KAE Servo Motor Controller
More @ www.Jameco.com/IC

Controllers operate from standard 8-bit serial interface (RS232 or RS485). Using RS485, any mix of up to 32 controllers may be operated from a single serial port. Complete documentation.

PIC-SERVO Motion Control Chipset for DC Motors
• PIC servo control for DC motors with digital encoders
• 32-bit position, velocity, and acceleration resolution
• PWM and direction outputs connect to servo amplifier
• Two chip set (PIC-SERVO 28-pin and PIC-ENC 18-pin)

Part No.	Description	Pins	1	10	50
146472	PIC-SERVO chip set, 0.3" DIP	28/18	$34.95	$29.95	$27.95

Optoisolators
22 more @ www.Jameco.com

Photo Transistors *General Purpose (6-Pin DIP)*
Single & Dual Channel

• Base lead connected
• NPN output transistor
• I_{CEO} (dark) Vce = 10V: 50nA max.
• Isolation test voltage: 7.5k V-P; 5.3k Vrms

Fig. 1 **Fig. 2**
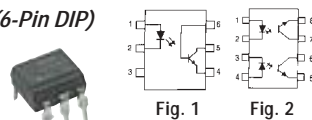
Part Number	Mfr. Cross Ref. No.	Fig.	Curr. Transfer Ratio (Min%)	Cont. Fwd. Curr. Max. (mA)	Vce (Sat) Max. (V)	Pricing			
						1	10	100	500
40985	4N25	1	20	50	0.5 (I_F = 50mA) (Ic = 2mA)	$.29	$.25	$.22	$.19
41056	4N35	1	100	50	0.3 (I_F = 10mA) (Ic = 5.0mA)	.39	.35	.25	.16
24918*	MCT6	2	20	50	0.4 (I_F = 16mA) (Ic = 0.2mA)	.59	.55	.49	.45

* 2 independant isolators in one package, 8-pin DIP

ISOCOM Transistor/Detector *Quad Channel (16-Pin DIP)*

• High Isolation voltage/CTR/sensitivity
• 4 independent isolators in one package
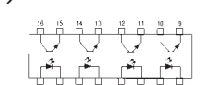• Isolation test voltage: 7.5k V-P; 5.3k Vrms
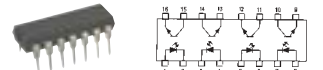
Part Number	Product Number	Curr. Trans. Ratio (Min%) IF = 10mA Vce = 10V	Cont. Fwd. Curr. Max. (mA)	Pricing			
				1	10	100	500
114083	ISQ203	225-450	50	$2.95	$2.65	$2.39	$2.15

ISOCOM Photo Transistor/Detector *(16-Pin DIP)*

• Isolation test voltage: 7.5k V-P; 5.3k Vrms
• NPN transistor • 1.17V_F @ 10mA (typical)
• Continuous forward current (max.): 50mA
• Photo transistor/detector

Part Number	Product Number	Curr. Transfer Ratio (Min%)	BVceo (Ic = 1mA)	Vce (Sat) IF=10mA; Ic=2mA	Pricing			
					1	10	100	500
160338	PS2501-4	80-6000	80V	0.3V max.	$1.55	$1.39	$1.25	$1.15

Aluminum Radial-Lead Electrolytic Capacitors
General purpose low voltage 85°C (A); HT Type 105°C (B) ±20%

Operating temperature range	-40°C to +85°C (A); -40°C to +105°C (B)	
Leakage Current (20°C)	After 1 min.	0.03CV or 4μA, whichever is greater
	After 2 min.	0.01CV or 3μA, whichever is greater

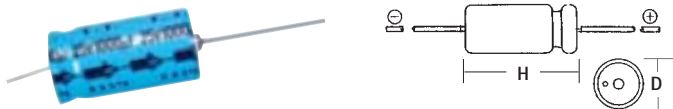✱ Prepackaged: order in increments of 10, 100 or 500

Part Number	Mfr. Cross Reference No. †	Op. Temp	Value (μF)	Voltage (V)	Size (mm)✱ D x H	Pricing 1	10	100	500
94160	5R1/50	A	1	50	4x5	✱	$.12	$.08	$.05
29831	R1/50	A	1	50	5x11	✱	.09	.07	.05
93729	R2.2/50	A	2.2	50	5x11	✱	.10	.08	.045
135183	R3.3/50	A	3.3	50	5x11	✱	.07	.05	.035
31000	R4.7/50	A	4.7	50	5x11	✱	.09	.06	.045
94220	5R10/35	A	10	35	5x5	✱	.15	.12	.06
198942	R22J/35	A	22	35	5x11	✱	.035	.03	.025
198926	R33J/25	A	33	25	5x11	✱	.045	.035	.025
93745	R33/50	A	33	50	6x11	✱	.07	.06	.04
198951	R47J/35	A	47	35	5x10	✱	.05	.04	.03
198969	R100J/35	A	100	35	6.3x11	✱	.07	.06	.05
31181	R470/25	A	470	25	10x16	✱	.12	.10	.09
30015	R1000/16	A	1000	16	13x21	✱	.15	.13	.10
93841	R1000/50	A	1000	50	16x26	.52	.46	.41	.34
199110	R1000J/100	A	1000	100	18x40	3.59	2.69	1.99	1.55
30533	R2200/25	A	2200	25	16x36	.45	.39	.35	.30
158431	R2200B50	B	2200	50	16x31	.99	.89	.70	.61
93850	R4700/25	A	4700	25	18x35	.79	.69	.62	.55
199005	R4700J/35	A	4700	35	18x35.5	2.95	2.19	1.69	1.25
163301	R4700/50	A	4700	50	22x42	1.99	1.79	1.50	1.31

†RADIAL CAPACITOR CROSS REFERENCES *Capacitor dimensions and lead spacing may vary
Elna: RC2/RE2; **IC:** RAR/RSS; **Marcon:** SEM/SSM; **Nichicon:** LB/VX/USA/SR/SA; **Rubycon:** MS7/TWSS; **Sprague:** 501D/513D; **UCC:** SME/SRE/SRA/SRG; **Panasonic:** KA/KS/SU

Aluminum Axial-Lead Electrolytic Capacitors
General purpose low voltage 85°C

Operating temperature range	-40°C to +85°C
Leakage Current (After 2 minutes 20°C)	0.02CV or 2μA, whichever is greater

✱ Prepackaged: order in increments of 10, 100 or 500

Part Number	Mfr. Cross Ref. No. †	Value (μF)	Voltage (V)	Size (mm)✱ DxH	Pricing 1	10	100	500
10866	A1/50	1	50	5x13	✱	$.15	$.115	$.09
93569	A2.2/50	2.2	50	6x13	✱	.19	.14	.10
199267	A22J/25	22	25	6x12	✱	.20	.14	.10
199355	A47J/35	47	35	6.3x16	✱	.20	.14	.10
93551	A100/35	100	35	8x16	✱	.24	.19	.14
93649	A1000/35	1000	35	13x26	.79	.71	.65	.57
199478	A2200J/50	2200	50	18x42	2.55	2.10	1.95	1.75

* Capacitor dimensions may vary
† AXIAL CAPACITOR CROSS REFERENCES: **Elna:** RE2; **IC:** RAR; **Marcon:** SEM; **Nichicon:** LB/VX; **Rubycon:** TWSS; **Sprague:** 501D/513D; **UCC:** SME; **Panasonic:** SU

209 More @ www.Jameco.com/Capacitors
Jameco carries a wide variety of capacitors. Also see our website for memory back-up and snap-in devices.

Ceramic Disc Capacitors (±20%)
25 and 50 Volt, Z5U Temperature Coefficient

Operating temperature range	+10°C to +85°C
Cap. change over temp. range	+22% to -56%
Dielectric withstanding voltage	2.5 times rated volt. for not < 1 sec.

Ceramic Disc Capacitors can be special ordered on ammo-style tape – 1000 piece minimum

✱ Prepackaged: order in increments of 10, 100 or 1000

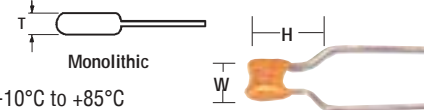| Part Number	Mfr. Cross Ref. No.	Capacitance	Voltage (V)	Dia.✱ (mm)	Pricing 1	10	100	1000	5000
15333	DC10	10pF	50	5	✱	$.07	$.05	$.02	$.015
15405	DC22	22pF	50	6	✱	.07	.05	.025	.02
15190	DC.001	.001μF	50	6	✱	.07	.056	.028	.025
15253	DC.047	.047μF	50	8	✱	.07	.06	.05	.04
151116	DC.1/25	.1μF	25	6	✱	.12	.11	.08	.07

*Capacitor dimensions and lead spacing may vary

Monolithic Ceramic Capacitors (±20%) (Z5U Series)

Applications:
• Data processing
• Communications engineering
Operating temperature range: -10°C to +85°C

Ceramic Disc Capacitors can be special ordered on ammo-style tape – 1000 piece minimum

✱ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Mfr. Cross Ref. No.	Capacitance	Voltage (V)	Size (mm)✱ W x T x H	Pricing 1	10	100	1000	5000
81541	MD10	10pF	50	3.5 x 2.0 x 3.0	✱	$.12	$.09	$.07	$.05
81533	MD22	22pF	50	4.0 x 2.0 x 4.0	✱	.10	.08	.07	.04
81525	MD100	100pF	50	3.5 x 2.0 x 3.0	✱	.09	.07	.045	.035
25507	MD.01	.01μF	50	3.5 x 2.0 x 3.0	✱	.09	.06	.04	.035
57621	MD.047	.047μF	50	2.5 x 2.5 x 3.0	✱	.10	.07	.05	.045
25523	MD.1	.1μF	50	6.0 x 2.0 x 4.0	✱	.07	.06	.04	.035
25558	MD.47	.47μF	50	4.5 x 2.5 x 4.5	✱	.25	.21	.16	.14
81509	MD1	1μF	50	6.0 x 3.0 x 7.0	.58	.52	.46	.41	.37

*Capacitor dimensions and lead spacing may vary

Dipped Tantalum Capacitors (±10%)
Resin Dipped Solid Tantalum Capacitors

• Flame retardant coating
• Exceptional temperature stability
• Low leakage current
• Moisture-resistant
• Designed for entertainment and commercial equipment

Operating temp. range	-55°C to +85°C (+125°C with derating)
Rated voltage DC	≤ + 85°C

✱ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Mfr. Cross Ref. No. †	Capacitance	Voltage (V)	Size (mm)✱ D x H	Pricing 1	10	100	1000
33486	TM.1	.1μF	35	4.5 x 7.0	✱	$.25	$.20	$.18
33507	TM.22	.22μF	35	4.5 x 7.0	✱	.25	.19	.15
33523	TM.33	.33μF	35	4.5 x 7.0	✱	.17	.15	.13
154860	TM1/25	1μF	25	3.0 x 6.0	✱	.29	.25	.22
33662	TM1	1μF	35	4.5 x 7.0	✱	.29	.25	.22
33734	TM2.2	2.2μF	35	4.5 x 7.5	.39	.35	.29	.25
94043	TM4.7/25	4.7μF	25	5.0 x 8.5	.50	.45	.39	.35
33806	TM4.7	4.7μF	35	5.5 x 9.0	.55	.48	.37	.33
94060	TM10/16	10μF	16	5.0 x 9.0	.45	.40	.36	.32
94078	TM10/25	10μF	25	5.5 x 9.0	.59	.50	.40	.36
33689	TM10	10μF	35	6.0 x 10.0	.89	.79	.69	.59
94094	TM22/16	22μF	16	6.0 x 10.0	.69	.59	.49	.45
94107	TM22/25	22μF	25	7.0 x 10.5	1.85	1.67	1.50	1.35
33785	TM33	33μF	25	8.0 x 13.0	2.59	2.25	1.95	1.75

*Capacitor dimensions and lead spacing may vary

† *Dipped Tantalum Capacitor Cross References*
Panasonic: EF Series; **AVX:** Tap Series; **Sprague:** 196D and 199D; **Kemet:** T350/ T360; **Mepco:** 49GS; **NEC:** DN; **Nichicon:** 599; **NIC:** NDTM; **Hitachi:** TSD-3; **Matsuo:** 202

.021" lead dia. | 1.08" | .250" | 1.08" | .09" body dia.

Single Resistor Value Pricing: 1/4-Watt Carbon Film Resistors (±5%)

To order: Use 5-digit part number adjacent to ohms in chart below
Values may not be combined for quantity price breaks

$.99/bag
100 piece bags

Pricing (Sold in bags of 100 pieces)				
Specify Part No. & Resistor Value	1 Bag	10 Bags	50 Bags	100 Bags
(see Standard Resistor Value Chart below)	$.99/bag	$.57/bag	$.49/bag	$.46/bag

Assortment Pricing: 1/4-Watt Carbon Film Resistor (±5%)

Assortments may not be combined for quantity price breaks

Part No.	Description (Including bulk pack values)	1	10	25
10719	5 ea. of 70 values (every other value from 10 ohm-5.6 MΩ) (350 pcs.)	$9.95	$8.95	$7.95
103165	10 ea. of 24 values marked (●) and 50 ea. of 6 values marked (✗) (540 pcs.)	12.95	11.49	9.95
10663	100 ea. of 27 values marked (▲) (2,700 pcs.)	24.95	22.49	20.49
10655	100 ea. of 160 values (all resistor values in the chart below) (16,000 pcs.)	119.95	107.95	96.95
81832	1/4 watt resistor component cabinet kit – 30 values (540 pcs.) see page 23	27.95	24.95	22.49

For resistor values you can refer to our website @ www.Jameco.com

Standard Resistor Values Chart

Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms
29882 ▲●	10	30162 ▲●	150	30963 ●	390	29663 ▲✗	1.0k	30314 ▲●	2.2k	31237 ▲●	5.1k	30453 ▲●	22k	30525	220k
31106 ▲●	47	30470 ▲✗	220	31165 ▲●	470	29735 ●	1.2k	30390 ▲●	2.7k	31270 ▲●	5.6k	30841 ▲●	33k	31202 ▲●	470
29946 ▲✗	100	30605 ▲●	270	31376	560	29760 ▲●	1.5k	30672 ▲●	3.3k	29911 ▲✗	10k	31149 ▲●	47k	29698 ▲●	1.0M
30082	120	30867 ▲●	330	31499 ▲●	680	30277 ▲●	2.0k	31026 ▲✗	4.7k	30146 ▲●	15k	29997 ▲✗	100k	29938 ▲●	10M

Carbon Film Resistors

Any 1/8 or 1/2-Watt Resistor value (below) can be special ordered – 1000 pc minimum
• 1/8-W – $12.95/k (bulk)   • 1/2-W – $15.95/k (bulk)

1/8-Watt Carbon Film Resistor (±5%) Assortments

1/8 & 1/2-Watt Resistor Assortments Value Chart (Ohms)

10 ✗	150 ✗	330 ✗	680 ✗	2.0k ✗	3.3k ✗	5.6k ✗	15k ✗	33k ✗	470k ✗
47 ✗	220 #	390 ✗	1.0k #	2.2k ✗	4.7k ✗	6.8k ✗	22k ✗	47k ✗	1.0M ✗
100 #	270 ✗	470 ✗	1.5k ✗	2.7k ✗	5.1k ✗	10k ✗	27k ✗	100k #	10M ✗

(✗), (#) symbols indicate Resistor values included in Assortments below.

Part No.	Cross Ref. No.	Values included	Description (see chart above)	Pricing 1	10
108302	ASST1830	✗ #	10 each of 24 values marked by ✗ and 50 each of 6 values marked above by # (540 pcs.)	$12.95	$11.49
108329	CAB182R	— —	1/8-watt resistor component cabinet kit – 30 values (540 pcs.) see page 23	24.95	22.49

1/2-Watt Carbon Film Resistor (±5%) Assortments

Part No.	Cross Ref. No.	Values Included	Description (see chart above)	Pricing 1	10
107879	CAB12R	—	1/2-watt resistor component cabinet kit – 30 values (540 pcs.) see page 23	$29.95	$26.95

Resistor Networks

Single-In-Line "SIP" Resistor Networks
8 and 10-Pin Bussed (125mW/Resistor) ±2%

Features (8BRN/10BRN):
• 8-pin package (7 resistors) = 8BRN
  10-pin package (9 resistors) = 10BRN
• Rated power per resistor at 70°C: 125mW/ resistor
• Op. temp. range: -55°C to +125°C
• Insulation resistance: 10,000MΩ min. at 100V
• Solderability: per MIL-R-83401
• Low profile 5mm (.200" body height)
• Low profile is compatible with DIPs
• Cermet thick film construction

Dimensions: mm

✱ **10 piece minimum**

Pricing per each			
1	10	100	1000
✱	$.26	$.22	$.16
Pricing for P/N 97826			
✱	$.22	$.19	$.13

Part No.	Pins	Ohms
97826	8	10k
97851	10	330
97869	10	470
97877	10	1.0k
97893	10	2.2k
24660	10	4.7k
24643	10	10k
98087	10	47k
98095	10	100k

Dual-In-Line "DIP" Resistor Networks
16-Pin Isolated (140mW/Resistor) ±2%

Features (16IRN):
• Maximum operating voltage: 100V
• Insulation resistance: 10,000MΩ min.
• Lead solderability/solvent resistance: meets requirements of MIL-R-83401
• Power rating at 70°C: 2.25 watts
• Compatible with automatic insertion equipment
• Copper leads for excellent heat dissipation   • Tolerance: ±2%

16 pins

Part No.	Ohms
164005	33
108556	100
108564	220
108572	330
108581	470
108599	1.0k
108610	4.7k
108628	10k
108644	100k

Pricing per each			
1	10	100	1000
$.49	$.43	$.37	$.31

SMD Resistor Assortment (±5%)◆
144 Values, 50 pcs. each; 7,200 Pieces Total

Resistance Value Chart:

1.2	33	430	4.3k	51k	620k
1.6	39	470	4.7k	56k	750k
2.2	43	510	5.6k	62k	820k
2.4	47	560	6.2k	68k	910k
2.7	51	620	6.8k	75k	1.0M
3.0	56	680	7.5k	82k	1.6M
3.3	62	750	8.2k	91k	1.8M
4.3	68	820	9.1k	100k	2.0M
4.7	75	910	10k	110k	2.2M
5.1	85	1.0k	11k	120k	2.4M
5.6	91	1.1k	12k	150k	2.7M
6.2	110	1.2k	13k	160k	3.0M
6.8	120	1.3k	15k	180k	3.3M
7.5	130	1.5k	16k	200k	3.6M
8.2	150	1.6k	18k	220k	3.9M
9.1	160	1.8k	20k	240k	4.3M
10	180	2.0k	22k	270k	4.7M
16	200	2.2k	24k	300k	5.1M
18	220	2.4k	27k	360k	5.6M
20	240	2.7k	30k	390k	6.8M
22	270	3.0k	33k	430k	7.5M
24	300	3.3k	36k	470k	8.2M
27	360	3.6k	39k	510k	9.1M
30	390	3.9k	43k	560k	10M

• Surface mount 0805 resistors, 144 values ranging from 1.2Ω to 10MΩ (50 pieces of each value)
• Thickness: 0.5mm
• Size: 2.0mm x 1.25mm
• Max. overload voltage: 200V
• Op. temp.: -50°C to 120°C

Includes: Case w/ labels

Part No.	Mfr. Cross Ref. No.	1	10	25
172806	16-500◆	$79.95	$71.95	$64.79

◆ Surface mount

SMD Resistor Assortment (±1%)◆
56 Values, 200 pcs. each; 11,200 pcs. Total
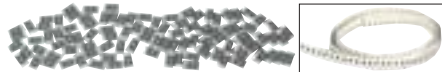
Packaged in strips of 200 pieces each

Surface mount 1206 Series resistors, 56 values ranging from 10 to 1MΩ – see chart.
• Max. working voltage: 200V
• Max. overload voltage: 400V
• Power @ 70°C: 1/8W
• Op. temp.: -55°C to +125°C
• Temp. coefficient: ±100 ppm/°C
• 4-digit indication: 1st 3 significant, 4th multiplier

Value Chart (Ohms)

10	200	3.92k	75k
12.1	243	4.99k	90.9k
15	301	6.19k	100k
20	392	7.5k	121k
24.3	499	9.09k	150k
30.1	619	10k	200k
39.2	750	12.1k	243k
49.9	909	15k	301k
61.9	1k	20k	392k
75	1.21k	24.3k	499k
90.9	1.5k	30.1k	619k
100	2k	39.2k	750k
121	2.43k	49.9k	909k
150	3.01k	61.9k	1M

Part No.	Mfr. Cross Ref. No.	1	10	25
156881	SMR1206SB◆	$99.99	$89.99	$79.99

◆ Surface mount

SMD Plastic Fliptop Case◆
Store 128 Different Surface Mount Components

• Perfect solution for storing P/N 156881 SMD resistor assortment, left
• 8 rows x 16 column grid
• Fliptop openings on each bin
• Color: gray
• Padded cover locks bins closed
• Size: 11.0"L x 8.3"W x 1.7"Thick

Includes: Labels for each bin

Part No.	Description	1	10
164267	SMD fliptop case◆	$47.99	$43.19

◆ Surface mount

Looking for more? Jameco has it all.
See our website for a broad selection of Resistors.

1/2-Watt Linear Taper (±10%)

- Temperature range: -55°C to +125°C
- Non-rotational key
- Non-slotted shaft end
- Mounting hole: 0.3125"
- Shaft diameter: 0.25"
- Shaft length: 0.5625"
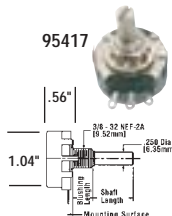- Max. panel thickness: 0.1875"

Includes: Mounting hardware

29081

.45" 11.43mm
.95"
.25" 6.35mm
.25" 6.35mm

Part Number	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
29049	P1K	1k	$.99	$.79	$.65	$.55
29081	P10K	10k	.99	.79	.65	.55

3/4-Watt, 3/4" Rectangular 15-Turn Linear Cermet (±10%)

.130 (3.30)
.500 (12.70)
.200 (5.08)
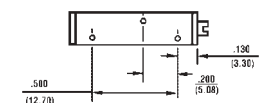
41911

- Side adjusting
- PC pins: .100" grid (2.54mm)
- Sealed to guard against contaminants
- Temp. range:-55°C to +125°C

Part Number	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
41937	43P500	500	$1.15	$.99	$.89	$.79
41890	43P5K	5k	1.15	.99	.89	.79
41822	43P10K	10k	1.15	.99	.89	.79
41911	43P50K	50k	1.15	.99	.89	.79

CLAROSTAT 2-Watt Linear Taper (±10%)

- 2W @ 70°C ambient
- Conductive plastic element
- Military No.: RV4N-AYSD
- Temp. range: -55° to +120°C
- Non-rotational key
- Shaft: dia.: 0.25"; length: 0.875"
- Mounting hole: 0.375"
- Max. panel thickness: 0.25"

Includes: Mounting hardware

95417

.56"
1.04"
3/8 -32 NEF-2A (9.52mm)
.250 Dia. (6.35mm)
Shaft Length
Mounting Surface

Part No.	Product No.	Ohms	1	10	50	100
183610	53C3-500	500	$7.95	$6.95	$5.95	$5.25
13936	CMU1021	1k	7.95	6.95	5.95	5.25
13995	CMU5021	5k	7.95	6.95	5.95	5.25
13952	CMU1031	10k	7.95	6.95	5.95	5.25
95417	CMU5031	50k	7.95	6.95	5.95	5.25

5-Watt Linear Taper Wire Wound (±20%)

- Temperature range: -10°C to 70°C
- Shaft diameter: 0.23" (6mm)
- Shaft length: 0.67", except P/N 140521 (0.25")
- Mounting hole: 0.32"
- Max. panel thickness: 0.1"
- Non-rotational key

Includes: Mounting hardware

140513

Part Number	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	50	100
140513	PW5B100	100	$2.99	$2.69	$2.39	$2.15
140521	PW5B500	500	2.95	2.65	2.39	2.15

SALE 1/2-Watt, 3/8" Square, Single-Turn Cermet (±10%)

- 1/2 watt linear taper @ 70°C
- PC pins: .100" grid (2.54mm)
- Sealed to guard against contaminants
- Pin Spacing: 0.1"
- Top adjusting
- Temp. range: -55°C to +125°C

42964

Cross Reference Chart

Equivalent to:	
Beckman	72PR
Bourns	3386P
Mepcopal	8038
Murata	3104P
Spectrol	63P
VRN	780-12P
Weston	840P

Part Number	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
43123	63P500	500	$.79	$.65	$.55	$.45
42964	63P1K	1k	.79	.65	.55	.45
43043	63P2K	2k	.79	.65	.55	.45
43078	63P5K	5k	.79	.65	.55	.45
43001	63P10K	10k	.79	.65	.55	.45
43051	63P20K	20k	.79	.65	.55	.45
43107	63P50K	50k	.79	.65	.55	.45
43027	63P100K	100k	.79	.65	.55	.45
43060	63P300K †	300k	.79	.63	.49	.35
63212	63P500K	500k	.79	.65	.55	.45
42981	63P1MEG	1M	.79	.65	.55	.45
105216	63P2MEG †	2M	.79	.63	.49	.35

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Jameco carries a selection of **Multi-Turn and Trimmer Potentiometers.**

Crystals

- Frequency calibration tolerance: ± 50ppm @ 25°C
- Operating temp.: -10°C to +60°C
- Drive level: 4.0 mW max.
- Frequency stability tolerance: ±50 ppm from -10°C to +60°C
- Shunt capacitance: 7pF max.

13.46 MAX
38.10
0.43
4.88
11.05 MAX

Dimensions in millimeters
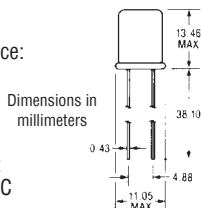
HC49/U (HC18/U) Case

Part Number	Mfr. Cross Reference No.	Frequency (MHz)	Impedance	Microprocessor	Pricing			
					1	10	100	1000
101274	CY2.457	2.4576	32pF	CDP1702/1802C/1804/1804C	$1.09	$.98	$.85	$.75
14592	CY4	4.0	20pF	MCS-40/MC6802,8,9/CDP1802	.89	.79	.69	.59
14710	CY7.37	7.3728	30pF	8051/8031	.89	.79	.69	.59
120061	CY11.05	11.0592	Series	General purpose	.89	.79	.69	.59

Low Profile Crystals

- Frequency range: 3.5 to 70.0MHz
- Operating temp.: -10°C to +60°C
- Drive level: 0.5mW (fundamental frequency)
- Aging: ±5ppm/year maximum
- Frequency stability tolerance: ±50ppm

3.6 max.
.43
13 max.
5.1 max.
4.8
11 max.
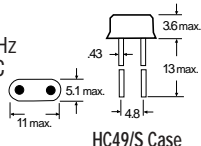
HC49/S Case

HC49/S Case (Low Profile)

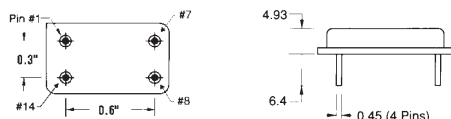| Part Number	Mfr. Cross Reference No.	Frequency (MHz)	Imped.	Max. Resist.	Microprocessor	Pricing			
						1	10	100	1000
137832	CY4LP	4.000	17pF	120Ω	MCS-40/MC6802, 8, 9/CDP1802	$1.05	$.85	$.75	$.65
137859	CY8LP	8.000	Series	60Ω	IM6100A/MC68B09	.75	.67	.59	.53

TTL Crystal Oscillators

- Input voltage: +5VDC ±0.5VDC
- Frequency stability ±100ppm

- OSC series oscillators fit into a 14-pin DIP socket PN 133006, below
- Operating temperature: 0°C to 70°C

27967

Pin #1
0.3"
#14
0.6"
#7
#8
4.93
6.4
0.45 (4 Pins)

Pin #	Function
1	N/C
7	GND
8	Output
14	+5VDC

Part Number	Mfr. Cross Reference No.	Frequency (MHz)	Input Current	Rise Fall Time	Max Input Current	Output Current	Pricing			
							1	10	100	1000
27967	OSC4	4.0	50mA	10ns	7mA	-1mA	$1.99	$1.79	$1.59	$1.39
76857	OSC100	100.0	90mA	3ns	25mA	-4mA	2.49	2.25	1.95	1.75

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Find a larger selection of Crystals and Oscillators on our website.

14-Pin Crystal Oscillator Socket

- Can be PCB mounted without the modifications that would be needed with DIP-IC sockets
- Low profile solder tail; machine tooled on 4 pins
- Good for prototyping and PCB mounting

Part No.	Description	1	10	100	1000
133006	Oscillator socket	$.59	$.45	$.39	$.35

Call for pricing on quantities over 5000 – we carry major manufacturers.

Any transistor may be supplied in ammo style tape by special order – 1000 piece min.

Siliconix

SPRAGUE THE MARK OF RELIABILITY

BOCA Semiconductor Corporation

National Semiconductor

TEXAS INSTRUMENTS

MOTOROLA

TO-18 Case   **TO-39 Case**   **TO-92 Case**   **TO-220 Case**

✳ Prepackaged: order in increments of 10, 100 or 1000
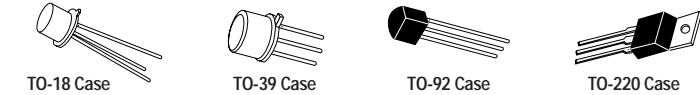
Part Number	Mfr. Cross Ref. No.	Case	Description	Vceo	Min. h$_{FE}$ @ Ic	Min. f_t (MHz)	NTE/ECG No.	1	10	100	1000
33064	TIP32A	TO-220	PNP power transistor	60	10 @ 3A	0.5	292	$.49	$.44	$.39	$.36
38228	2N2219A	TO-39	NPN general purpose	40	100 @ 150mA	300	128	.59	.49	.45	.39
28628	PN2222	TO-92	NPN general purpose	30	100 @ 150mA	250	123AP	✳	.12	.10	.09
38236	2N2222A	TO-18	NPN general purpose	40	100 @ 150mA	250	123A	.39	.35	.29	.25
28644	PN2907	TO-92	PNP general purpose	40	100 @ 150mA	200	159	✳	.013	.012	.011
38279	2N2907A	TO-18	PNP general purpose	60	100 @ 150mA	200	129P	.39	.35	.29	.25
25831	MJE2955T	TO-220	PNP power transistor **SALE**	60	20 @ 4A	2	332	.59	.54	.49	.39
25857	MJE3055T	TO-220	NPN power transistor	60	20 @ 4A	2	331	.65	.55	.47	.43
38359	2N3904	TO-92	NPN general purpose	40	100 @ 10mA	300	123AP	✳	.08	.06	.045

Small-Signal High-Voltage

Part No.	Product No.	Case	Desc.	Vceo	Min. h$_{FE}$@Ic (mA)	1	10	100	1000
178546	MPSA42	TO-92	NPN	300	40 @ 10	$.22	$.19	$.15	$.12

Small-Signal General-Purpose

SALE

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Case	Desc.	Vceo	Min. h$_{FE}$@Ic (mA)	1	10	100	1000
178511	PN2222A	TO-92	NPN	40	100 @ 150	✳	$.09	$.06	$.04
178520	PN2907A	TO-92	PNP	-60	100 @ 150	✳	.09	.06	.04
178600	2N3906	TO-92	PNP	-40	100 @ 10	✳	.09	.07	.045

SAMSUNG Power

Part No.	Product No.	Case	Desc.	Vceo	Min. h$_{FE}$@Ic	1	10	100	1000
179354	TIP31C-SAM	TO-220	NPN	100	10 @ 3A	$.58	$.52	$.47	$.39
179371	TIP41C-SAM	TO-220	NPN	100	15 @ 3A	.65	.53	.45	.39
179389	TIP42C-SAM	TO-220	PNP	-100	15 @ 3A	.55	.50	.45	.40

N-Channel MOSFETs

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Case	Drain Source Brkdwn Vltg.	Min. On-State DS Current	1	10	100	1000
178669	2N7000-FSC	TO-92	60VDC	0.2A	✳	$.12	$.11	$.10
184719	IRF840	TO-220	500VDC	8.0A	1.59	1.43	1.29	1.15

Rectifiers, Triacs, SCRs and Diodes

WOG   **4-Pin DIP Case**   **4-lead Molded Case**   **KBP type**   **179-01 Case**   **TO-126 Case**   **TO-220/AB**   **DO-27A/DO-41/DO-35**
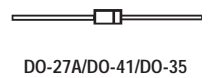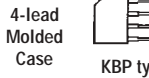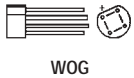
Full Wave Bridge Rectifiers

SALE

Part No.	Mfr. Cross Ref. No.	NTE/ECG	Case	Description	1	10	100	1000
103018	W02G	—	WO type	200 PRV, 1A	.49	.39	.29	.21
103042	DF02M	5332	4-pin DIP	200 PRV, 1A	.31	.27	.21	.18
103034	DF06M	5332	4-pin DIP	600 PRV, 1A	.35	.29	.23	.19
145429	KBP02M	—	KBP type	200 PRV, 1.5A	.49	.44	.39	.29
25574	MDA990-3	5322	179-01	200 PRV, 30A	4.49	3.99	3.39	2.89

Silicon Rectifiers

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	NTE/ECG	Case	Description	1	10	100	1000
35975	1N4001	116	DO-41	50 PRV, 1A	✳	$.03	$.025	$.02
35991	1N4004	116	DO-41	400 PRV, 1A	✳	.04	.025	.02
36011	1N4007	125	DO-41	1000 PRV, 1A	✳	.04	.03	.025
36265	1N5404	5804	DO-27A	400 PRV, 3A	✳	.15	.11	.08
36273	1N5408	5809	DO-27A	1000 PRV, 3A	✳	.15	.11	.08

Triacs

Part Number	Mfr. Cross Ref. No.	NTE/ECG	Case	Description	1	10	100	1000
140425	2N6071A	5603	TO-126	200 PRV, 4A	$.69	$.59	$.49	$.45
31819	SC146B	5633	TO-220	200 PRV, 10A (2N6342)	1.69	1.52	1.37	1.23

Zener Diodes

Part No.	Mfr. Cross Ref. No.	NTE/ECG	Case	Description	10	100	500	1000
36089	1N4732	5096	DO-41	4.7V @ 53mA 1 W	$.12	$.10	$.08	$.06
36097	1N4733	135A	DO-41	5.1V @ 49mA 1 W	.12	.10	.08	.06
36118	1N4734	136A	DO-41	5.6V @ 45mA 1 W	.12	.10	.08	.06
36126	1N4735	137A	DO-41	6.2V @ 41mA 1 W	.12	.10	.08	.06
36169	1N4742	142A	DO-41	12.0V @ 21mA 1 W	.12	.10	.08	.06

Rectifiers

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Case	Description	1	10	100	1000
177615	1N4001	DO-41	50 PIV @ 1A	✳	$.04	$.03	$.02
177623	1N4002	DO-41	100 PIV @ 1A	✳	.04	.03	.02
177631	1N4003	DO-41	200 PIV @ 1A	✳	.05	.04	.03
177640	1N4004	DO-41	400 PIV @ 1A	✳	.04	.03	.02

Switching Diodes

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	NTE/ECG	Case	Description	1	10	100	1000
35967	1N3600	519	DO-35	50 PRV @ 100μa, 200mA	✳	$.12	$.10	$.08
36038	1N4148	519	DO-35	75 PRV @ 50μa, 10mA	✳	.04	.03	.025
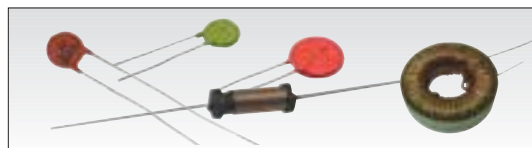
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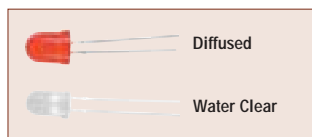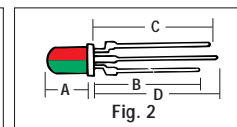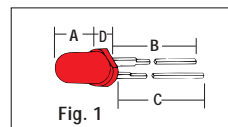
Part Number Color Code Legend
Sale **Refurbished** **Closeout**

Call for OEM PRICING – we carry major manufacturers.

Diffused

Water Clear

National Semiconductor

LITEON

TEXAS INSTRUMENTS

hp invent

SALE

Fig. 1

Fig. 2

Standard-Output LEDs

Part Number	Mfr. Cross Ref. No.	Fig.	Emitting Color	Lens/Feature Description	LED Size	Diameter inch/mm	Dimensions (Inches) A	B	C	D	Lead Spacing	Typical Vf @ 20 (mA)	Typical mcd @ mA	Wavelength nm	Pricing 1	10	100	1000
137411	LVB2040	1	Blue	Blue diffused	T1	.119/3	0.21	0.98	1.03	0.04	0.10	5.5 @ 20	7.0 @ 20	430	$2.49	$2.25	$1.95	$1.69
34622	LR2040	1	Orange Red	Red diffused (XC209R)	T1	.119/3	0.14	1.09	1.14	0.04	0.09	2.0 @ 20	1.5 @ 10	655	❋	.15	.13	.095
94529	LH2040	1	Red	Red diffused (XC209RB)	T1	.119/3	0.18	1.04	1.13	0.03	0.07	2.0 @ 20	2.7 @ 20	700	❋	.19	.15	.12
138691	LVB3330	1	Blue	Blue diffused	T1 3/4	.197/5	0.34	0.98	1.03	0.06	0.08	5.5 @ 20	10 @ 20	430	2.49	2.25	1.95	1.75
134332	LT18B3-81UR	1	Blue	Water clear	T1 3/4	.197/5	0.30	0.93	1.00	0.04	0.10	5.0 @ 20	630 @ 20	428	2.65	2.45	2.25	1.95
34761	LG3330	1	Green	Green diffused (XC556G)	T1 3/4	.197/5	0.31	0.79	0.88	0.04	0.09	2.8 @ 20	12 @ 10	565	❋	.15	.14	.10
94511	LH3330	1	Red	Red diffused (XC556RB)	T1 3/4	.197/5	0.31	0.81	0.86	0.04	0.08	2.8 @ 10	4.0 @ 10	697	❋	.17	.13	.10
34673	LHG3392	2	Red/Green	White diff. bi-color/tri-state[1]	T1 3/4	.197/5	0.30	1.02	1.05	1.12	0.03	2.8 @ 20	3 & 12 @ 10	697/565	.29	.25	.19	.15

[1] Reverse polarity to change color

LEDTECH LEDs

- Typical DC forward current 20mA

Ledtech is a QS9000 and ISO-9000 Certified Company

SALE

Fig. 1

Fig. 2

151415

152864
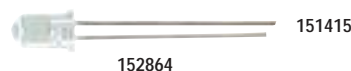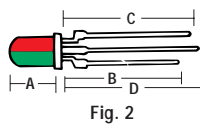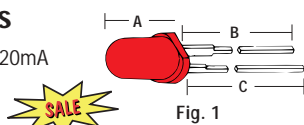
Part Number	Product Number	Fig.	Emitting Color	Lens/Feature Description	LED Size	Dia. (inch/mm)	Dimensions (Inches) A	B	C	D	Lead Spacing	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Pricing 1	10	100	1000
152768	LT0324-41	1	Green	Green clear	T1	.119/3	0.20	0.89	0.95	—	0.10	2.1 @ 20	20 @ 20	567	❋	$.17	$.14	$.11
152750	LT0344R-41	1	Orange Red	Red clear	T1	.119/3	0.20	0.89	0.95	—	0.10	2.1 @ 20	23.5 @ 10	635	❋	.19	.16	.12
152864	LT1873-81	1	Red Super Brt.	Water clear	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.7 @ 20	1000 @ 20	660	.25	.19	.15	.12
152805	LT1873-81-UR	1	Red Ultra Brt.	Water clear	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.9 @ 20	2000 @ 20	660	.29	.25	.19	.15
156970	LT1873-UR-C07	1	Red Ultra Brt.	Water clear (wide angle)	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.9 @ 20	2112 @ 20	660	.35	.31	.25	.19

LED Mounting Hardware

95513

23077

95521

Part No.	Mfr. Cross Ref. No.	Description	Color	Mounting Hole Dia.	Panel Thickness	Pricing 1	10	100	1000
95513	LMH100	T1 snap-in	Black	.185"	up to .070"	❋	$.12	$.11	$.09
23077	LMH200	T1 3/4 ring & clip	Black	.257"	up to .125"	❋	.15	.135	.12
95521	LMH250	Rect. snap-in	Black	.306" x .202"	up to .092"	❋	.20	.18	.16

Panel Mount LED Indicators

- Easy panel installation
- Panel/status/ instrument indicators
- Vf @ If: 2V @ 20mA
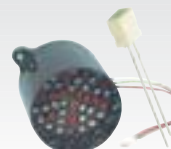- Color: red
- Chrome housing
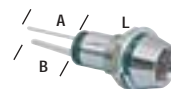
141129: LED size: T1
**141137:** LED size: T1 3/4

- Mounting hole: .24"
- Mounting hole: .31"

Part No.	Mfr. Cross Ref. No.	Dimensions (in.) L	A	B	Pricing 1	10	100	1000
141129	L913RD	.56	.39	.32	$.89	$.79	$.71	$.55
141137	L917RD	.70	.55	.47	.89	.79	.71	.55

T1 3/4 Cliplite® LED Lens Mount

- Requires no assembly tools, just snap in
- Material: lens – polycarbonate; spacer – nylon
- Increases viewing angle to 180°
- Devices mount on .375" centers
- Helps guard against electrostatic discharge up to 16kV while affording the LED physical protection

29612

Figure 1 (5mm)   Figure 2 (5mm)

Part No.	Product No.	Description	Color	Fig.	Mounting Hole Dia.	Panel Thickness	Pricing 1	10	100	1000
14277	CLF280CTP	T1 3/4	Clear	1	.25"	.063"–.125"	$.24	$.21	$.18	$.15
29612	CLF280RTP	T1 3/4	Red	1	.25"	.063"–.125"	.25	.22	.19	.17
124927	CLB300CTP	T1 3/4	Clear	2	.25"	.031"–.25"	.24	.21	.18	.15

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Additional Hi-Output LEDs and Accessories on our website.

Infrared Emitters

- Use for remote control and/or for fiber optics
- **P/N 133946:** Can be used with cameras, see pg 57 (peak emission wavelength: 940nm @ If 20mA)

SALE
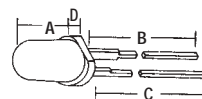
106526

Part No.	Mfr. Cross Ref. No.	Description	Size	Diameter inch/mm	Dimensions (inches) A	B	C	D	Vf @ If	nm	mWatts	Pricing 1	10	100	1000
106526	TLN110	Infrared emitter diode (GaAs)	T1 3/4	0.200/5	0.34	0.78	0.84	0.04	1.2V @ 20mA	940	9	$.39	$.29	$.19	$.15
133946	SLI-0308CP	Infrared emitter diode (GaAs)	T1	0.12/3	0.22	0.98	1.00	0.03	1.7V @ 50mA	940	200	.83	.75	.61	.47

High-Output LEDs

- Typical DC forward current 20mA
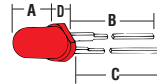
Part No.	Mfr. Cross Reference No.	Emitting Color	Lens/Feature Description	LED Size	Diameter inch/mm	Dimensions (Inches) A	B	C	D	Lead Spacing	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Pricing 1	10	100	1000
142885	CLP1309-U	White	Water clear	T1	.119/3	0.22	0.84	0.90	0.04	0.08	3.6 @ 20	2300 @ 20	—	$4.49	$3.95	$3.49	$2.95
131895	TLSH180P	Orange	Water clear	T1 3/4	.197/5	0.39	0.80	0.86	0.06	0.10	2.1 @ 20	7000 @ 20	623	2.49	2.19	1.95	1.79
153146	LT2K33-URP-8	Yellow	Water clear	T1 3/4	.197/5	0.36	0.90	0.95	—	0.10	2.4 @ 20	9300 @ 20	595	.59	.55	.49	.45
183214	MCDPG503PCI	Green	Water clear	T1 3/4	.197/5	0.30	1.04	1.09	0.04	0.08	3.5 @ 20	2200 @ 20	515	2.95	2.65	2.39	2.15
197624	BVU5E1BA4	Blue	Water clear	T1 3/4	.197/5	0.29	1.06	1.12	0.04	0.08	3.5 @ 20	10000 @ 20	470	3.19	2.89	2.59	2.29
183222	MCDL513SBC4	Blue	Water clear	T1 3/4	.197/5	0.29	1.02	1.13	0.04	0.08	5.0 @ 20	3000 @ 20	470	3.25	2.95	2.65	2.39
183231	T18W133196	White	Water clear	T1 3/4	.197/5	0.30	1.06	1.12	0.04	0.08	3.6 @ 20	3000 @ 20	—	2.95	2.65	2.39	2.15
142893	CLP1509	White	Water clear	T1 3/4	.197/5	0.34	0.79	0.88	0.04	0.08	3.6 @ 20	3700 @ 20	—	3.95	3.59	2.95	2.75

LED Displays

The general advantages of LED displays compared to incandescent types include:
- Longer lifetime (averaged more than 300,000 hours) • Lower power consumption
- Compact size suitable for instrumentation and graphic representations

Soldering:
- Soldering bath: not more than 5 seconds @ 260°C
- Soldering iron: not more than 3 seconds @ 300°C under 30W

24740 & 24782   17187   32951   118906

7-Segment Displays

Part No.	Mfr. Cross Reference No.	Character Height	Illuminated Color	Buss Polarity*	Pins/Leads	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Decimal Point #	Pricing 1	10	100	1000
24740	LSD3221-11	.300"	Red	CA	11	2.1 @ 20	2.5 @ 20	697	LHDP	$.89	$.79	$.72	$.64
24782	LSD3211-11	.300"	Red	CC	10	2.1 @ 20	2.5 @ 20	697	RHDP	.89	.75	.65	.49
17187	LSD5051-11	.500"	Red	CC	10	2.1 @ 20	0.9 @ 20	697	RHDP	.89	.80	.72	.65
17208	LSD5061-11	.500"	Red	CA	10	2.1 @ 20	0.9 @ 20	697	RHDP	.89	.75	.65	.49
24715	LDD5121-20	.560"	Red	2-digit CA	18	2.1 @ 20	0.8 @ 20	697	RHDP	1.25	1.05	.89	.75
97199	LSD23265-10	2.24"	Red	CA	10	1.7 @ 20	21 @ 20	660	RHDP	4.75	4.29	3.85	3.45
105591	LSD40054-20†	4.0"	Orange Red	CA	10	2.0 @ 20	18 @ 20	635	RHDP	9.49	8.29	7.49	6.49

† P/N 105591: 5 diodes per segment

Dot Matrix Displays

Part No.	Mfr. Cross Reference No.	Jameco Socket Number	Character Height	Illuminated Color	Buss Polarity*	Pins/Leads	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Decimal Point #	Pricing 1	10	100	1000
173833	HP5082-7300	—	.290"	Red	4x7 Numeric	8	5.0 @ 170	.03 @ 20	660	RHDP	$7.95	$6.39	$4.79	$3.39
32951	TIL311	37161	.300"	Red	4x7 Hex character	11	5.0 @ 5	0.1 @ 5	660	—	16.95	14.35	12.92	11.62
118906	LTP747R	37161	.680"	Orange Red	5 x 7 AC/CR	12	1.7 @ 20	0.2 @ 20	655	—	1.95	1.55	1.17	.82
183265	LMD5821ASR-20	—	2.3"	Red	5 x 8 CC/AR	14	1.7 @ 20	12 @ 20	660	—	4.95	4.49	3.95	3.49

* CA-Common Anode/CC-Common Cathode/AC-Anode Column/CR-Cathode Row/AR-Anode Row # LHDP-Left Hand Decimal Point / RHDP-Right Hand Decimal Point

CDS Photocells

- Generate variable signal based on detection of light levels
- Operating temperature: -30°C to +70°C
- Applications: auto-focus lenses, exposure meters, contrast controls for TVs, dimmer or light switches, flame detectors, electronic toys, street lamp switches, optocouplers
- Soldering: 230°C for 3 seconds
- Cadmium Sulfide (CDS)

Part No.	Mfr. Cross Ref. No.	Rating Vp	mW	Resistance (Ω) Dark	Light	Size (inches) A	B	Lead Spacing (inches)	Lead Length (inches)	Pricing 1	10	100	1000
136063	CDST18	20	40	100k	10k	0.14	0.17	0.10	1.50	$.69	$.62	$.55	$.49
120299	CDS0045001	350	400	300k	8k	0.38	0.43	0.30	1.44	1.95	1.75	1.59	1.39

LCD Modules

Serial LCD Modules

Scott Edwards Electronics, Inc.

Ideal for use w/ BASIC Stamps (pg 60), 80C52-BASIC controllers (pg 5) and PCs!

Includes instruction codes for character gen., cursor control, printing, etc. Examples for Stamps in PBASIC included.

16 characters x 2 lines Integrated Display

- Terminal style 1200–9600bps serial input with 16-byte input buffer
- EEPROM storage of settings, six custom characters, and a splash screen
- Serial control of the standard LED backlight
- Low current draw; 5mA (backlight off) to 40mA (backlight on and bright)
- Power requirement: 4.8 – 5.5VDC @ 5mA (recommend P/N 164101, pg 21)

Part No.	Description	Module Size (LxWxT)	1	10	25
150990	LCD module	3.2" x 2.0" x0.5"	$48.95	$44.09	$39.65

16 characters x 2 lines LCD Serial Backpack®

- High-contrast supertwist display
- Serial "backpack" accepts RS-232, or inverted CMOS, TTL at 2400 or 9600bps
- Power requirement: 4.8 – 5.5VDC @ 3mA (recommend P/N 164101, pg 21)
- Module Size: 3.1"L x 1.4"W x 0.7"T

Part No.	Description	1	10	25
133129	LCD module	$59.95	$53.99	$48.59

Part Number Color Code Legend
Sale Refurbished Closeout

Order 24/7 Toll Free 1-800-455-6119

JAMECO®

Point Six   16 x 4 Parallel LCD Module

- 16 x 4 character display (.78"H)
- Character font: 5 x 8 dots
- Input data: 4-bit or 8-bit interface available
- Display size: 2.4"L x 1.0"W x 0.06"T

Requires: 4.5V @ 2mA wall transformer (recommend P/N 164101, pg 21)

Part No.	Description	Module Size (LxWxT)	1	10	25
151933	16 x 4 parallel LCD	3.4" x 2.4" x.25"...............	$24.95	$22.49	$19.95

Serial LCD Interface Module

For Parallel LCD Displays with Hitachi 44780 Chipset

- Supports 1 x 8 thru 4 x 20 LCD display formats
- Provides word wrap, control character processing for display blanking, cursor blanking, up-down-left-right cursor controls
- Compatible with P/Ns 151933 (above) and 171715 (right)

TRISYS

Part No.	Description	Size (LxW)	1	10	25
157981	LCD serial module	1.5" x 1.0"	$22.95	$20.95	$18.95

0.6" High 3½-Digit LCD Digital Panel Meters

- Automatic polarity indication
- Input impedance: >100MΩ
- Input Ranges: 200mV, 20V, 200V, 500V
- Accuracy: ±0.5% • Bezel
- Dimensions: 2.7"L x 1.7"W
- Supply voltage: 9-12VDC (recommend 9V battery P/N 151095, pg 59)

175951

Part No.	Description	1	10	25
175951	"1999" LCD DPM	$12.95	$11.95	$10.95
146835	"1999" LCD DPM backlit display	19.95	17.99	16.19

MONARCH INSTRUMENT   Industrial Panel Meter

0 to 1mA DC

- Low cost, high quality
- Basic DC accuracy to 0.3%
- DC Range: 0 – 1mA Taut Band • UL recognized
- Replacement for: Yokogawa, Modutec, Jewell, WPIC, Hoyt, Crompton, Brighton

Part No.	Product No.	Depth	Size (LxWxH)	1	10	25
171897	PMG6S	1.2"	1.5" x 1.7" x 1.7"	$14.45	$13.05	$11.75

More @ www.Jameco.com

See our website for our complete
selection of LCD Modules and Displays.

LCD Parallel Display

16 Characters x 2 Lines
- 14-pin/terminals
- Controller: KS0066U or equivalent
- Character font size: 0.125"W x 0.200"H
- Max. input voltage: 5.3VDC
- 8-bit interface data bus
- Display size: 2.5"L x 0.7"W
- Operating input voltage: 5VDC (recommend P/N 164101, pg 21)

Part No.	Product No.	Module Size (LxWxT)	1	10	25
171715	AC162A	3.4" x 1.2" x 0.5"	$19.95	$17.95	$15.95

16 Characters x 2 Lines Serial LCD Module

- Backlight control, bar graphs, large digits, multiple displays, software contrast control, auto line wrapping, and auto scroll feature
- Serial input at 1200–19,200bps (jumper selectable)
- Connect 16 modules using same 2 wire interface
- Backlight supply current: 40mA typical
- Display size: 2.5"L x 0.7"W
- Power requirement: 5VDC @ 9mA (recommend P/N 164101, pg 21)

Includes: Manual and software

Part No.	Description	Module Size (LxWxT)	1	10	25
174166	16 x 2 w/ interface	3.2" x 1.5" x 0.8"	$64.95	$58.49	$52.65

20 x 4 Serial LCD Modules

- 20 characters x 4 line display with large digit mode
- Backlight control, bar graphs, large digits, multiple displays, software contrast control, auto line wrapping and auto scroll feature
- Backlight supply current: 90mA typical
- Serial input at 1200–19,200bps (jumper selectable)
- Connect 16 modules using the same 2 wire interface
- Display size: 3.0"L x 1.0"W

Includes: Manual and software

150957: 20 x 4 Serial LCD Module
- Power requirement: 5VDC @ 10mA typical (recommend P/N 164101, pg 21)

150957

157323

157323: 20x4 Serial LCD Module with keypad Interface
- Power requirements: 5VDC @ 16mA typical (recommend P/N 164101, pg 21)

Part No.	Description	Module Size (LxWxT)	1	10	25
150957	LCD module	3.9" x 2.4" x 0.7"	$89.95	$80.95	$72.95
157323	Module w/ interface	3.7" x 2.4" x 1.1"	109.95	99.95	89.95

AC Tube Axial Fans

124062

106585

W   D
H

- Rating 115 & 220VAC @ 50/60Hz
- Low acoustical noise rating
- Agency approved fans
- Ball and sleeve bearings
- Air flow from 11 to 211 CFM

UL   CSP   CE

16934

102891

Part Number	Manufacturer	Product Number	Voltage (VAC)	Dimensions (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	1	10	50	100
162704	Toyo	USTF60301153W	115	2.36 x 2.36 x 1.18	11	Ball	38	4.0	UL/CSA/CE	29	12" leads	$15.95	$14.39	$12.95	$11.65
124062	Sunon	SP101AT1122HBT	115	4.68 x 4.68 x 1.00	78	Ball	180	18.0	CSA/TUV/CE	46	terminals	15.95	14.39	12.95	11.65
118965	Fulltech	UF12A12BTL1	115	4.68 x 4.68 x 1.50	64	Ball	80	15.0	UL/CSA/TUV/CE	37	terminals	14.95	13.49	12.15	10.95
106585	Common Wealth	FP108-1-S1/T	115	4.68 x 4.68 x 1.50	105	Sleeve	180	12.0	UL/CSA/CE	47	terminals	14.95	13.49	12.15	10.95
16934	Common Wealth	FP108-1-S1-B	115	4.68 x 4.68 x 1.50	105	Ball	200	17.0	UL/CSA/TUV/CE	47	terminals	16.95	15.29	13.75	12.39
102883	Sunon	SP100A-1123XBT	115	4.68 x 4.68 x 1.50	117	Ball	240	20.0	UL/CSA/TUV/CE	50	terminals	14.95	13.95	12.95	11.95
108724	Fulltech	UF15AC12BTH	115	6.75 x 5.90 x 1.50	211	Ball	230	28.0	UL/CSA/TUV/CE	58	terminals	29.95	26.95	23.95	21.49
102891	Sunon	DP200A-2123XBT	220	4.68 x 4.68 x 1.50	117	Ball	120	21.0	UL/CSA/TUV/CE	50	terminals	15.95	14.39	12.95	11.65

Straight and Right-Angle 24" Fan Cords

- Cord type: SPT-1 (2) conductor black • Volt. rating: 300V • Temp.range: 60°C • Fits all terminal fans

| Part No.	Description	Length	1	10	100	250
28564	Straight socket cord	24"	$.79	$.69	$.59	$.56
104192	90° angle socket cord	24"	1.25	1.09	.99	.89

28564

104192

Call for additional OEM PRICING – we carry major manufacturers.

- Low profile
- Ball and sleeve bearings
- Power input by lead wires
- PBT black thermo plastic frame and impeller
- Agency approved fans
- Low power consumption
- Low acoustical noise rating
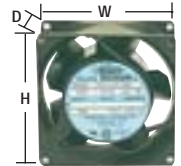
134586   **102955**   **75467**   **102875**

Part Number	Manufacturer	Product Number	Voltage (VDC)	Dimensions (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	Pricing 1	10	50	100
161699	Sunon	KD1204PFB2-8	12	1.60 x 1.60 x 0.40	6.3	Ball	70	0.6	UL/CSA/TUV	30	12"	$7.95	$6.95	$6.25	$5.59
154851	NMB	1606KL-04W-B50	12	1.60 x 1.60 x 0.60	8	Ball	110	1.0	UL/CSA/VDE	34	5"	7.95	7.19	6.45	5.85
136178	Adda	AD0412MS-C70	12	1.60 x 1.60 x 0.80	5	Sleeve	110	1.32	UL/CSA	23	9"	5.49	4.39	3.29	2.35
75344	Delta	DFB0412M	12	1.60 x 1.60 x 0.80	7.3	Ball	80	0.8	UL/CSA/VDE/CE	28	4.5"	7.69	6.95	6.25	5.65
175046	Globe Motors	D24-B08A-04W3-000	12	2.36 x 2.36 x 0.80	10.6	Ball	90	0.8	UL/CSA/TUV/CE	22	13"	6.95	5.59	4.19	2.95
75352	Common Wealth	FP108FDC12VS2	12	2.36 x 2.36 x 1.00	15.5	Sleeve	110	1.3	UL/CSA/TUV/CE	25	12"	6.95	5.59	4.19	2.95
150421	Jamicon	JF0625B1H	12	2.36 x 2.36 x 1.00	20.5	Ball	230	2.7	UL/CSA/TUV	30.5	10"	6.95	6.29	5.65	5.09
134586	Delta [1]	BFB0712H	12	2.98 x 2.98 x 1.18	11.3	Ball	360	2.6	UL/CSA/TUV/VDE	38	4"	11.95	9.59	7.19	5.05
16993	Various [2] *	FAN7315SL	12	3.15 x 3.15 x 1.00	25-40*	Sleeve	120-200*	1-2*	UL/CSA*	25*	4-12"*	6.95	6.29	5.65	4.95
75361	Various*	FAN6315BL	12	3.15 x 3.15 x 1.00	25-40*	Ball	120-200*	1-2*	UL/CSA*	25*	4-12"*	5.95	4.79	3.59	2.55
131748	NMB	3110KL-04W-B10	12	3.15 x 3.15 x 1.00	25	Ball	140	1.3	UL/CSA	25	9"	7.95	6.39	4.79	3.35
154288	Sunon	KDE1208PTS3-6	12	3.15 x 3.15 x 1.00	29.4	Sleeve	120	1.4	UL/CSA/TUV/CE	24.5	5.5"	3.95	3.19	2.39	1.69
185826	NMB [3]	3110KL-04W-B69	12	3.15 x 3.15 x 1.00	42	Ball	340	3.1	UL/CSA/VDE/CE	35	13"/3 leads	6.95	5.59	4.19	2.95
102955	Sunon	KD1208PTB1-6	12	3.15 x 3.15 x 1.00	42.5	Ball	230	2.6	UL/CSA/TUV/CE	33.5	12"	6.95	6.29	5.59	5.09
172460	Nidec [2]	TA300DCM33406-68	12	3.15 x 3.15 x 1.00	43	Ball	290	3.5	UL/CSA	41	11"/3 leads	9.95	8.95	7.19	5.39
190983	Sunon	KD1209PTB1-6A	12	3.63 x 3.63 x 1.00	51	Ball	220	2.6	UL/CSA/TUV	34	12"	9.49	8.55	7.69	6.95
162739	NMB (Smart Fan) [†]	3610KL-04W-B56	12	3.63 x 3.63 x 1.00	55	Ball	430	3.8	UL/CSA/VDE/CE	37	10"/3 leads	7.95	6.39	4.79	3.35
174140	Common Wealth	FP108MS3	12	4.68 x 4.68 x 1.00	54	Sleeve	140	1.7	UL/CSA/TUV/CE	25	12"	6.95	5.59	4.19	2.95
75467	NMB	4710NL-04W-B30	12	4.68 x 4.68 x 1.00	70	Ball	320	2.9	UL/CSA/VDE/CE	34	12"	9.95	8.95	8.09	7.29
102875	Delta	WFB1212H	12	4.68 x 4.68 x 1.00	86.5	Ball	360	4.3	UL/CSA/TUV	37.6	12"	10.95	8.79	6.59	4.65
94625	Sunon	KD1212PMB1-6A	12	4.68 x 4.68 x 1.50	108	Ball	570	6.8	UL/CSA/VDE/CE	24	12"	11.95	9.59	7.19	4.99
189851	Delta	WFB1212HE	12	4.68 x 4.68 x 1.50	108	Ball	490	5.9	UL/CSA/VDE/CE	41.3	12"	13.95	11.19	8.39	5.89
189886	NMB	3610KL-05W-B30	24	3.63 x 3.63 x 1.00	40.6	Ball	87	2.1	UL/CSA/VDE	34	12"	7.95	6.39	4.79	3.35
153411	Sunon	KD2412PMB2-6A	24	4.68 x 4.68 x 1.50	98	Ball	230	5.5	UL/CSA/TUV	36.5	12"	14.95	13.49	12.15	10.95

[1] **134586:** Blower type fan   [2] **16993/172460:** Replacement for the PC/XT computer power supply fan   [3] **185826:** Speed sensor
[†] **162739:** Temperature control 50˚C, 3 leads   * Manufacturers & specifications may vary

129 More @ www.Jameco.com/Fan

Heat Sinks, CPU Heat Sinks and Fans

TO-3 Heat Sink
- Traditional design
- Black anodized aluminum
- 4.8"L x 1.5"W x 1.3"H

Part No.	Product No.	Type	1	10	100
16512	DUDE4	TO-3	$2.95	$2.75	$2.49

TO-3 Heat Sink
- Uses less board space   • 8 Watts
- Ideal for 0.5" centering between boards
- Spacers not included   • 1.9'L x 1.4'W x 1.3"H

Part No.	Product No.	Type	1	10	100
151546	635-125B2	TO-3	$1.05	$.95	$.81

TO-220 Heat Sink
Thermalloy
- Black anodized aluminum
- 0.75"L c 0.52"W x 0.38"H   • 2 Watts

Part No.	Product No.	Type	1	10	100
158051	THM6078	TO-220	$.39	$.35	$.29

Heat Sink Compound
Thermally loaded silicone-based grease that improves transfer of energy across the metal to metal interface between transistor or rectifier to heat sink.
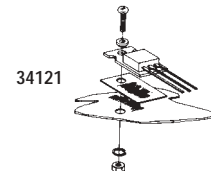
Part No.	Product No.	Color	1	10	100
167249	THM250 (2 oz.)	Opaq. white	$8.95	$7.95	$6.95

Heat Sink Mounting Kits
- TO-3 and TO-220 heat sink insulator assemblies
- 10 kits per pack

Part No.	Type	Description	1	10	100
34121	TO-220	5-piece kit	$3.95	$3.55	$3.19
34139	TO-3	12-piece kit	4.95	4.49	3.95

34121   **34139**

CPU Heat Sinks and Fans
- Excellent for avoiding CPU overheating during extended system on-time
- High efficiency cooling fans
- Easy installation – just snap it in

151298   **206244**   **196242**

181278   **195784**   **118092**   **196074**

Part No.	Description	Size (H" x W" x D")	Agency Approvals	1	10	50	100
151298	Heat sink w/ fan for slot 1 (SECC 1)	4.90 x 2.15 x 1.34	UL/CE/TUV	$10.95	$9.89	$8.89	$6.95
206244	Heat sink w/ fan dual fan slot (SECC 2)	5.25 x 1.95 x 1.3	CE	12.95	11.65	10.49	9.49
196242	Heat sink w/ fan for socket 7 (ATX)	2.26 x 2.12 x 1.07	UL/CE/TUV	9.95	8.95	7.95	6.95
181278	Heat sink w/ fan for socket 7 (ATX)	2.12 x 2.05 x 1.67	UL/CE/CSA	9.95	8.95	7.95	6.95
195784	Heat sink w/ fan for socket 7 (AT/ATX)	2.12 x 2.13 x 1.52	—	9.95	8.95	7.95	7.95
196074	Heat sink w/ fan for socket 7 (AT)	2.40 x 2.0 x 1.32	UL/CE/TUV	9.95	8.95	9.95	8.95
118092	Heat sink w/ fan for 586 CPU w/ snap	2.18 x 2.30 x 1.00	UL/CE/TUV	4.95	3.69	3.49	2.59

Part Number Color Code Legend
Sale Refurbished Closeout

Scott Edwards Electronics, Inc.

Mini SSC II Module
(Serial Servo Controller)

• Controls 8 pulse-proportional servos
• Receives serially at 2400 or 9600 baud
• Module is addressable, thus allowing two units to share the same line to control a total of 16 servos
• Connections to serial input can be established using modular adapter from DE9 to RJ11 (P/N 114737, pg 46)
• Size (PCB): 1.9"L x 1.4"W • One-year warranty

Part No.	Description	1	10
151001	Serial servo controller module........	$49.95	$42.95

More Controllers @ www.Jameco.com

See our website for the complete selection.

Industrial Motion Controllers for Brush, Brushless and Stepper Motors

All JR Kerr Automation Engineering controllers include integrated power amplifiers. Up to 32 controllers can be daisy-chained from a single full-duplex RS-485 port. See P/N 184971 for RS-232 to RS-485 adapter.

185009: • For 3-phase brushless motors with hall effect sensors or conventional DC brush-type motors
• High current amplifier: 7A continuous, 10A peak, 12 to 48VDC supply

184971: • Lets you operate the controllers from any standard RS-232 port

184997: • Integrated indexer and driver for 2 or 4 phase stepper motors
• Full/half step bipolar chopper drive, 2A per phase, 7.5 to 46VDC supply
• Trapezoidal position profiling, velocity mode, up to 50,000 steps per second
• Limit switch inputs, general purpose outputs, step/dir outputs for use with external drivers

185009

KAE

184971

Part No.	Description	Size (L" x W" x H")	1	10
185009	PIC-SERVO 3PH board for brush or brushless motors	3.1 x 3.1 x 1.0	$ 239.95	$215.95
184971	Z232-485 serial port adapter	3.1 x 2.1 x 0.5	59.95	53.95
184997	PIC-STEP motor control board	3.1 x 2.1 x 0.9	159.95	143.95
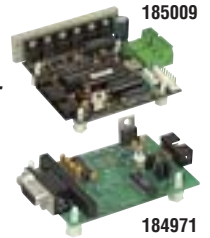
12VDC Continuous Tubular Push and Pull Solenoids

• 12VDC nominal voltage continuous
• Life expectancy: 2,000,000 cycles

142463 *163803*

Part No.	Type	Coil Res. (±10%)	Power Consum.	Holding Force (lbs. @ 20°C)	Wires (in.)	Size (ins.) (L x Dia.)	Shaft Dia. (in.)	Wt. (lbs.)	Pricing 1	10	100
163803*	Push	42.8Ω	3.4W	0.75	9.0	2.00 x .60	0.156	0.10	$9.95	$8.95	$7.95
142463	Pull	36Ω	4.0W	0.63	2.0	1.63 x .43	0.150	0.04	5.95	5.35	4.79

* Manufactured by **Guardian** (A420-067074-1)

Bipolar and Unipolar Stepper Motors

• Excellent for precision control
• Can be operated in forward/reverse mode
• See website for compatible power supplies

117954 (Fig. 1)   *SALE*   *105890 (Fig. 2)*   *173180 (Fig. 3)*   *169201 (Fig. 4)*

Part Number	Mfr. Cross Ref. No.	Fig.	Step Angle	No. of Phases	Drive System	Volt. (VDC)	Phase Resis. (Ohms)	Curr. (mA)	Phase Inductance (mH)	Detent Torque (g-cm)	Holding Torque (g-cm)	Mounting Hole Space Diagonal (in.)	Mounting Holes (in.)	Shaft Dia. (in.)	Shaft Length (in.)	Motor Dia. (in.)	Motor Height (in.)	Pricing 1	10	50
117954	LB82773-M1	1	7.5°	2	Bipolar	5	6	800	7	100	1080	2.60	1.95	0.250	0.75	2.25	1.00	$3.79	$2.99	$2.25
166705	PM42S-096	1	3.8°	4	Unipolar	12	84	140	16	60	450	1.95	0.13	0.117	0.40	1.66	1.64	3.95	2.95	2.15
105890	SM4200[1]	2	3.6°	4	Unipolar	12	75	150	39	80	600	1.73	0.11	0.197	0.43	1.66	1.28	8.79	7.85	6.99
173180	30BY102AH[2]	3	.09°	4	Unipolar	12	200	60	49.5	400	400	1.42	0.14	0.194	0.36	1.18	.68	11.49	10.35	9.35
169201	STP57D317	4	1.8°	4	Unipolar	24	81	160	68	80	600	2.65	0.18	0.250	0.75	2.20	2.10	7.49	6.75	6.09

[1] **105890**: Use P/N 161998 for shaft coupler, see website   [2] **173180**: Geared (7.5°/Step)

GBM   Bipolar and Unipolar Stepper Motors

• Bearing type: ball
• Dielectric strength: 500V, 50Hz/minute
• 18" lead wires
• Step angle: 1.8˚
• Ambient temperature: -10˚C to +55˚C
• Insulation resistance: 100MΩ @ 500VDC
• Use P/N 161998, see website for shaft coupler

GBM is an ISO-9001 Certified Company

Red A
A̅
Yellow
Orange B
Brown B̅
Bipolar (Fig. 1)
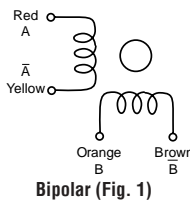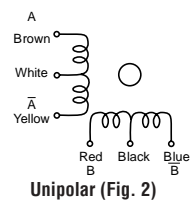
A
Brown
White
A̅
Yellow
Red Black Blue
B   B̅
Unipolar (Fig. 2)

NEMA 17 (155459)

NEMA 22 (162026)

Part Number	Product Number	Fig.	NEMA Form	No. of Phases	Drive System	Voltage (VDC)	Phase Resistance (Ohms)	Current (mA)	Phase Inductance (mH)	Detent Torque (g-cm)	Holding Torque (g-cm)	Mounting Hole Space Diagonal (in.)	Mounting Holes (in.)	Shaft Diameter (in.)	Shaft Length (in.)	Motor Diameter (in.)	Motor Height (in.)	Weight (lbs.)	Pricing 1	10	50
155459	42BYG023*	1	17	2	Bipolar	12	30	400	36	220	2,100	1.73	0.1	0.197	0.6	1.7	1.3	0.5	$17.95	$16.29	$14.59
162026	57BYG084	2	22	4	Unipolar	12	20	600	22	725	6,000	2.65	0.2	0.250	1.0	2.2	2.0	1.3	26.95	24.29	21.85

* Dual shaft

3-12 VDC Motors

star motor

JOHNSON ELECTRIC
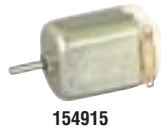
154915   *SALE*   *177498*   *181964*

34 More Motors @ www.Jameco.com

Jameco also carries Vibrator and Geared Motors.

Part Number	Mfr. Cross Reference No.	Manufacturer	Nominal Voltage	Voltage Range (V)	Current (Amps)	RPM (max.)	Torque (g-cm)	Terminal Type	Shaft Dia.	Shaft Length	Size (D" x L")	Pricing 1	10	100
154915	ST-130-12240	Star Motor	3VDC	1.5-3	0.070	5200	4.0	0.8"/solder	0.08"	0.33"	.178 x 1.08	$1.09	$.99	$.89
177498	RC280RA-2485	Mabuchi Motor	4.5VDC	3-14	0.150	10300	33.3	11"/solder	0.08"	0.43"	0.95 x 1.20	1.75	1.55	1.39
181964	NF203G12	Johnson Electric	12VDC	9-14	0.030	5000	—	.07"/solder	0.08"	0.57"	0.95 x 1.20	1.49	1.15	.78

12 VDC Reversible Gear Head Motors

HSIANG NENG

- Solder-type terminal
- High torque construction
- Oil bearing design for long service life
- Insulation resistance: 10MΩ
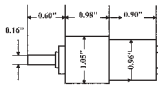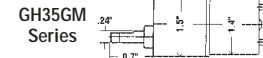- Dielectric strength: 300VDC

167038   153437   155011

HN27GD Series

GH30GM Series

GH35GM Series

HN27GD Series

Part Number	Product Number	Rated Voltage	Operating Range (VDC)	No Load Current (mA)	No Load Speed (rpm)	Started Torque (kg-cm)	Motor Size Gear Ratio	Gear Size Dia. x Lgth (in.)	Motor Size Dia. x Lgth (in.)	Shaft Size Dia. x Lgth (in.)	Pricing 1	10	50
167038	GH12-0953Y	12	4.5 – 24	45	14	1.2	188:1	1.0 x 0.9	1.1 x 1.0	.16 x .60	$14.95	$12.95	$10.95

GH30GM Series

Part Number	Product Number	Rated Voltage	Operating Range (VDC)	No Load Current (mA)	No Load Speed (rpm)	Started Torque (kg-cm)	Motor Size Gear Ratio	Gear Size Dia. x Lgth (in.)	Motor Size Dia. x Lgth (in.)	Shaft Size Dia. x Lgth (in.)	Pricing 1	10	50
153437	GH12-1045Y	12	3.0 – 12	35	15	0.8	200:1	0.9 x 1.0	1.1 x 0.6	.16 x .70	$16.95	$15.25	$13.75
162190	GH12-1324Y225	12	4.5 – 12	65	225	0.7	30:1	1.0 x 0.9	1.1 x 0.6	.16 x .70	16.95	15.25	13.75

GH35GM Series

Part Number	Product Number	Rated Voltage	Operating Range (VDC)	No Load Current (mA)	No Load Speed (rpm)	Started Torque (kg-cm)	Motor Size Gear Ratio	Gear Size Dia. x Lgth (in.)	Motor Size Dia. x Lgth (in.)	Shaft Size Dia. x Lgth (in.)	Pricing 1	10	50
155011	GH12-1926	12	4.5 – 12	55	2	15	3000:1	1.3 x 0.9	1.5 x 1.1	.23 x .90	$19.95	$17.95	$15.95
155820	GH12-1830Y-P	12	4.5 – 12	50	4.5	13	1000:1	1.3 x 0.9	1.5 x 1.0	.23 x .90	19.95	17.95	15.95
155838	GH12-1641T-L	12	3.0 – 12	65	20	10	270:1	1.3 x 0.9	1.5 x 0.8	.23 x .90	19.95	17.95	15.95
152910	GH12-1926Y	12	4.5 – 12	48	44	11.8	100:1	1.3 x 1.0	1.5 x 0.7	.24 x .90	21.95	19.75	17.75
151440	GH12-1632TI	12	4.5 – 12	75	69	11	100:1	1.3 x 0.9	1.5 x 0.7	.23 x .90	21.95	18.55	16.69
161381	GH12-1634T	12	4.5 – 12	111	200	3.6	30:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	19.95	17.95	15.95
164785	GH12-1640Y	12	4.5 – 24	45	300	0.8	10:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	21.95	19.79	17.89

Open-Frame Switching DC Power Supplies

SKYNET 10-Watt

- Output voltage:
  +5VDC @ 2A
- Input voltage:
  115/230VAC @ 50-60Hz
- Input connector: 5-position
  3-pin 0.156" male locking headers
- Mating input conn.: P/N 104723 (see web)
- Output connector: 2-position
  0.156" male locking headers
- Mating output connector: P/N 176743 (web)

+5VDC @ 2A
Ground

Part No.	Product No.	1	10	50	100
184866	SNP-0502-B	$8.95	$7.19	$5.39	$3.79

SUPER MAC 24.5-Watt

SALE

- Output voltage:
  +5V @ 2.5A
  +12V @ 1A
- Input voltage:
  100-240VAC @ 50-60Hz
- 2A @ 250V fuse on board
- Mating input conn.: P/N 104432
  (3-position housing connector, see web)
- Mating output connector: P/N 104731
  (6-position housing connector, pg 28)

12VDC @ 1A
Ground
Ground
5VDC @ 2.5A
5VDC @ 2.5A
No Connection

Part No.	Product No.	1	10	50	100
166967	U002512010	$10.95	$8.79	$6.59	$4.95
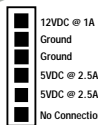
ASTEC 60-Watt

- Output voltage:
  +5VDC @ 8A
  +12VDC @ 3.5A
  -12VDC @ 1A
- Input voltage:
  100-240VAC @ 50-60Hz
- Input connector: 0.156" male header
- Mating input connector: P/N 104432 (see web)
- Output connector: 0.156" male header
- Mating output connector: P/N 104731 (pg 28)

+12VDC@3.5A
+5VDC@8.0A
+5VDC@8.0A
Ground
Ground
-12VDC@1.0A

Part No.	Product No.	1	10	50	100
180970	LPT62	$23.95	$21.59	$19.45	$17.45

10 to 60-Watt Switching Power Supplies

SALE

Part Number	Mfr.	Product Number	Watts (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector (Mating Connector)	Output Connector (Mating Connector)	Certification	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	50	100
184866	Skynet	SNP-0502-B*	10	+5/2	115/230 @ 50-60	.156" M header (P/N 104723, see web)	.156" M header (P/N 176743, see web)	UL/CUL/TUV	4.4 x 1.6 x 0.8	0.2	$8.95	$7.19	$5.39	$3.79
166967	Super Mac	U002512010*	24.5	+5/2.5, +12/1	100-240 @ 50-60	.156" M header (P/N 104432, see web)	.156" M header (P/N 104731, pg 28)	UL/CSA/TUV	3.7 x 2.5 x 1.2	0.4	10.95	8.79	6.59	4.95
163985	Samsung	PSPL430201A	43	+5/5, +12/1.5	100-120 @ 50-60	3 prong receptacle (P/N 38050, see web)	(P/N 42067, P/N 78326, pg 45)	UL/CUL	6.1 x 2.1 x 1.0	0.6	14.95	11.99	8.99	6.29
188066	EOS	VLT60-3000	60	+5/8, +12/3, -12/0.5	100-240 @ 50-60	.156" M header (P/N 104432, see web)	.156" M header (P/N 104731, pg 28)	UL/VDE/CE	4.0 x 2.0 x 0.6	0.3	29.95	24.95	24.95	24.95
180970	Astec	LPT62*	60	+5/8, +12/3.5, -12/1	100-240 @ 50-60	.156" M header (P/N 104432, see web)	.156" M header (P/N 104731, pg 28)	UL/CSA/TUV/ VDE/CE	5.0 x 3.0 x 1.6	0.8	23.95	21.59	19.45	17.45
171731	Delta	DPS-60MPB	60	+3.3/8, +5/9, +12/1, -12/0.2	90-270 @ 47-63	3 prong receptacle (P/N 38050, see web)	.156" M header (12-pin housing incl.)	UL/CUL/TUV	5.8 x 3.3 x 1.4	1.0	7.95	6.39	4.79	3.35
171281	Astec	LPT65	60	+5/8, +12/1, +24/2	100-250 @ 50-60	.156" M header (P/N 104432, see web)	.156" M header (P/N 104731, pg 28)	UL/CSA/VDE	5.0 x 3.0 x 1.6	0.8	24.95	22.45	19.95	18.15

* See photo above

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100 More Power Supplies @ www.Jameco.com/PS

Part Number Color Code Legend
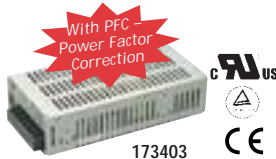Sale Refurbished Closeout

Special Order Any Mean Well Power Supply | **Mean Well Authorized Distributor** | **Mean Well is an ISO-9001 Certified Company**

• High efficiency • Low output ripple • 100% burn-in • Short circuit, overload over-voltage protected • UL approved • MTBF rated • Two-year warranty

65-Watt Dual Output

- Input voltage: 90-264VAC @ 47-440Hz; 120-370VDC
- DC voltage adjustment: CH1: +10, -5%
- Mating input connector: P/N 104432, see web
- Mating output connector: P/N 104731, pg 28
- Size: 5.0"L x 3.0"W x 1.5"H

Part No.	Product No.	Watts	Output	1	10	25
194896	PD65B	65.5	5VDC @ 6.0A 24VDC @ 2.6A	$29.95	$26.95	$23.95

65-Watt Single Output

- Input voltage: 90-264VAC @ 47-440Hz
- Mating connectors: P/N 104432 & P/N 104731, pg 28
- No minimum load required
- Size: 5.0"L x 3.0"W x 1.6"H
- Weight: 0.6 lbs.

Part No.	Product No.	Watts	Output	1	10	25
148638	PS-65-12	62.4	12VDC @ 5.2A	$31.95	$28.79	$25.89

25-Watt Single Output

- Input voltage: 100 to 240VAC
- Full input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, spade terminal (see web)
- No minimum load required
- Size: 3.9"L x 3.8"W x 1.4"H • Weight: 0.8 lbs.

123254

Part No.	Product No.	Watts	Output	1	10	25	100
123246	S-25-5	25.0	5VDC @ 5.0A	$39.95	$35.95	$32.95	$29.95
123254	S-25-12	25.2	12VDC @ 2.1A	39.95	35.95	32.95	29.95
123271	S-25-24	26.4	24VDC @ 1.1A	39.95	35.95	32.95	29.95

40-Watt Single Output

- Input voltage: 100 to 240VAC
- Full input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, spade terminal (see web)
- No minimum load required
- Size: 5.1"L x 3.9"W x 1.5"H
- Weight: 1.0 lb.
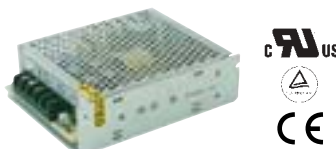
Part No.	Product No.	Watts	Output	1	10	25	100
123297	S-40-12	42	12VDC @ 3.5A	$44.95	$39.95	$35.95	$32.95

60-Watt Single Output

- Input voltage: 100 to 240VAC
- Full input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, spade terminal (see web)
- No minimum load required
- Size: 6.3"L x 3.8"W x 1.5"H
- Weight: 1.2 lbs.

123351

Part No.	Product No.	Watts	Output	1	10	25	100
123334	S-60-12	60	12VDC @ 5A	$49.95	$44.95	$39.95	$35.95
123342	S-60-15	60	15VDC @ 4A	49.95	44.95	39.95	35.95
123351	S-60-24	60	24VDC @ 2.5A	49.95	44.95	39.95	35.95

60-Watt Dual Output

- Input voltage: 100 to 240VAC
- Full input range (no changes required for 110 or 220VAC operation)
- Mating input/output connector: P/N 103587, spade terminal (see web)
- Min. load: all outputs at 10% of rated load

123457

- Weight: 1.2 lbs.
- Size: 6.3"L x 3.8"W x 1.5"H

Part No.	Product No.	Watts	Output	1	10	25	100
123457	D-60A	56	5VDC @ 4A, 12VDC @ 3A	$54.95	$49.95	$44.95	$39.95
123465	D-60B	58	5VDC @ 3A, 24VDC @ 1.8A	54.95	49.95	44.95	39.95

60-Watt Quad Output

- Input voltage: 85-264VAC @ 47-63Hz
- Line regulation: 0.5%-1.0%
- Ripple and noise: 100-120mV peak to peak
- DC voltage adjustment: CH 1: +10, -5%
- Minimum load: all output at 10% rated load
- Mating input/output connector: P/N 103587, spade terminal (see web)
- Size: 6.3"L x 3.9"W x 1.5"H • Weight: 1.2 lbs.
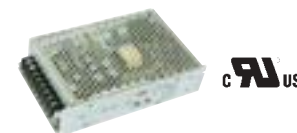
Part No.	Product No.	Watts	Output	1	10	25	100
147045	Q60	60	+5VDC @ 5.5A; -5VDC @ 0.5A +12VDC @ 2A; -12VDC @ 0.5A	$59.95	$53.95	$47.95	$43.95

75-Watt Single Output

- Input range: 85-264VAC @ 47-63Hz; 120-370VDC
- Ripple and noise: 80mV -100mV peak to peak
- DC voltage adjustment: CH1:+10%,-5%
- Soft start-circuit, limiting AC surge current
- Line regulation: ±5%
- Mating input/output conn.: P/N 103587, spade terminal (see web)
- Size: 7.0"L x 3.9"W x 1.3"H • Weight: 1.2 lbs.

With PFC – Power Factor Correction
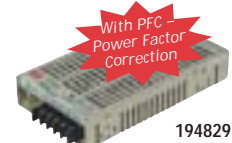
194829

Part No.	Product No.	Watts	Output	1	10	25	100
194829	SP75-5	75	5VDC @ 15A	$69.95	$62.95	$56.95	$49.95
194837	SP75-12	75	12VDC @ 6.3A	69.95	62.95	56.95	49.95

120-Watt Quad Output

- Input voltage: 88-132VAC or 176-264VAC @ 47-63Hz
- Mating input/output connector: P/N 103587, spade terminal (see web)
- Switch selectable input
- Minimum load: all outputs at 10% of rated load
- Size: 8.0" x 4.4"W x 2.0"H • Weight: 2.0 lbs.

Part No.	Product No.	Watts	Output	1	10	25
132370	Q-120D	124	+5VDC @ 8A; 24VDC @ 2A +12VDC @ 2A; -12VDC @ 1A	$74.95	$67.95	$60.95

150-Watt Single Output

- Input voltage: 90 to 130VAC or 180 to 260VAC
- Mating input/output connector: P/N 103587, spade terminal (see web)
- Switch selectable input
- No minimum load required
- Size: 7.8"L x 4.3"W x 2.0"H • Weight: 1.8 lbs.

9V also available!

123449

Part No.	Product No.	Watts	Output	1	10	25	100
123431	S-150-15	150	15VDC @ 10A	$69.95	$62.95	$56.95	$49.95
123449	S-150-24	156	24VDC @ 6.5A	69.95	62.95	56.95	49.95
167345	S-150-48	154	48VDC @ 3.2A	69.95	62.95	56.95	49.95

MTBF Table

Product Number	MTBF (Hours) @ Full Load/40˚C	Product Number	MTBF (Hours) @ Full Load/40˚C	Product Number	MTBF (Hours) @ Full Load/40˚C
PD-65	288,000	Q-60	284,000	S-240	179,000
PS-65	300,000	SP-75	208,800	SP-300	168,000
S-25	330,000	Q-120	261,000	S-320	188,000
S-40	314,000	S-150	286,000	SP-500	133,000
S-60	316,000	SP-150	191,000	PSP-500	130,000
D-60	301,000	SP-200	183,000		

77 More @ www.Jameco.com/PS

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150-Watt Single Output

With PFC – Power Factor Correction

• Input voltage: 85-264VAC @ 47-63Hz
• PFC: 98% @ 115VAC; 95% @ 230VAC
• Overload, overvoltage & short circuit protection
• Mating input/output connector:
  P/N 103587, spade terminal (see web)
• No minimum load requirement   • MTBF table, pg 16
• 100% full load burn-in test   • Operating temp.: 0-50°C
• Size: 7.8"L x 3.9"W x 2.0"H   • Weight: 1.7 lbs.

Part No.	Product No.	Watts	Output	1	10	25
173411	SP-150-15	150	15VDC @ 10A	$89.95	$80.95	$72.95
173403	SP-150-24	150	24VDC @ 6.5A	89.95	80.95	72.95

200-Watt Single Output

With PFC – Power Factor Correction

• Input voltage: 85-264VAC @
  47-63Hz; 120-370VDC
• Line regulation: ±5%   • MTBF table, pg 16
• Ripple & noise: 100mV – 150mV peak to peak
• DC voltage adjustment: CH1: +10, -5%
• Soft-start circuit, limiting AC surge current   • Size: 7.8"L x 3.9"W x 2.0"H
• Mating input/output connector: P/N 103587, spade terminal (see web)   • Wt.: 1.9 lbs.

Part No.	Product No.	Watts	Output	1	10	25
194773	SP-200-12	200.4	12VDC @ 16.7A	$99.95	$89.95	$80.95

240-Watt Single Output

7.5V and 30V also available!

• Input voltage: 88 to 132VAC or
  176 to 264VAC automatic switching
• Mating input/output connector:
  P/N 103587, spade terminal (see web)
• Automatic fan controls internal temperature
• Size: 8.0"L x 3.7"W x 2.6"H   • Weight: 2.5 lbs.   • MTBF table, pg 16

Part No.	Product No.	Watts	Output	1	10	25	100
137656	S-240-24	240	24VDC @ 10A	$119.95	$107.95	$96.95	$86.95

288 to 300-Watt Single Output

137390

With PFC – Power Factor Correction

• PFC: 98% @ 115VAC; 95% @ 230VAC
• Input voltage: 100 to 240VAC
  (with PFC - Power Factor Correction)
• Mating input/output connector: P/N 103587,
  spade terminal (see web)   • MTBF table, pg 16
• Automatic fan controls internal temperature
• Over-temperature protected   • Size: 9.0"L x 4.5"W x 2.0"H   • Wt.: 2.6 lbs.

Part No.	Product No.	Watts	Output	1	10	25
137390	SP-300-12	288	12VDC @ 24A	$159.95	$143.95	$129.95
137402	SP-300-24	300	24VDC @ 12.5A	159.95	143.95	129.95

320-Watt Single Output

• Input voltage:
  88-132VAC/176-264VAC @ 47-63Hz
• Mating input/output connector:
  P/N 103587, spade terminal (see web)
• Automatic on/off cooling fan   • MTBF table, pg 16
• Size: 8.5"L x 4.5"W x 2.0"H   • Weight: 2.5 lbs.

Part No.	Product No.	Watts	Output	1	10	25
196656	S-320-24	320	24VDC @ 12.5A	$129.95	$116.95	$104.95

480-Watt Single Output

With PFC – Power Factor Correction

• Input voltage: 100-240VAC @ 50/60Hz
• Built-in remote control
• Mating input/output connector:
  P/N 103587, spade terminal (see web)
• PFC: 98% @ 115VAC; 95% @ 230VAC
• Short circuit, overload, over voltage and over temperature protection
• Cooling fan (temperature sensing)   • Remote voltage sensing
• MTBF table pg 16   • Size: 7.3"L x 4.8"W x 3.8"H   • Weight: 4.2 lbs.

Part No.	Product No.	Watts	Output	1	10	25
147053	SP500-24	480	24VDC @ 20A	$229.95	$206.95	$185.95

500-Watt Single Output

With Parallel Operation

With PFC – Power Factor Correction

• PFC: 98% @ 115VAC; 95% @ 230VAC
• Input voltage: 90-264VAC @ 47-63Hz; 127-370VDC
• Ripple and noise: 200mV – 240mV peak to peak
• Parallel/series operation can reach 3KW
• Current sharing/remote control/remote sense
• Line regulation: ±2%   • MTBF table pg 16
• Mating input/output connector: P/N 103587, spade terminal (see web)
• Size: 11.0"L x 5.0"W x 2.5"H   • Weight: 5.5 lbs.

190713

Part No.	Product No.	Watts	Output	1	10	25
190713	PSP-500-12	500	12VDC @ 41.5A	$269.95	$242.95	$218.95
190721	PSP-500-48	500	48VDC @ 10.5A	269.95	242.95	218.95

26 More @ www.Jameco.com/PS

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are always 99% In-Stock and at Lower prices.**

Digital Power   *POWER-ONE*   *INTEGRATED POWER DESIGNS*

COMPAQ 73-Watt 4 Output

SALE

• **Output voltage:**
   +5VDC @ 10A
  +12VDC @ 1.5A
   -5VDC @ 0.3A
  -12VDC @ 0.3A
• Input voltage:
  100/240VAC @ 50-60Hz

Part No.	Product No.	1	10	25
101813	141688-003	$17.95	$16.19	$14.59

GlobTek 150-Watt

24VDC @ 6.5 Amps
• **Output voltage:**
  +24VDC @ 6.5A
• Input voltage:
  115/230 @
  50-60Hz
• 150 watts

SALE

Part No.	Product No.	1	10	25
199515	RT-3S150-24	$64.95	$58.49	$52.95
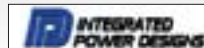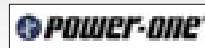
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Phone: 1-800-455-6119
Fax: 1-800-237-6948
www.Jameco.com

73 and 150-Watt Switching Power Supplies

SALE

Part Number	Manufacturer	Product Number	Watts (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector/Cord	Output Connector	Certification	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10	50
101813	Compaq	141688-003*	73	+5/10, +12/1.5, -5/0.3, -12/0.3	100/240 @ 50-60	3-prong receptacle (P/N 38050, pg 19)	.156" M header 103392, see web; 78300 (2), 42075 (1), pg 45	UL/CSA/TUV	6.6 x 3.8 x 2.9	2.1	$17.95	$16.19	$14.59
199515	GlobTek	RT-3S150-24*	150	+24/6.5	115/230 @ 50-60	Screw terminal (P/N 103587, see web)	Screw terminal (P/N 103587, see web)	UL/CE	7.9 x 4.3 x 1.9	1.8	64.95	58.49	52.95

* See photo above

276-Watt Precision Regulated Linear Power Supply

- Output current: 20A
- Illuminated rocker switch
- Short circuit protection
- Output terminals: see web for mating cigarette plugs and page 39 for mating banana terminal plugs
- Fuse protected • Output: 13.8 VDC
- Input voltage: 115VAC @ 60Hz

Includes: heavy duty 5'8" 3-prong power cord

Part No.	Model No.	Output Terminals	Size (L" x W" x H")	Wt. (lbs.)	1	10	25
138675	52-192012	Banana	10.0 x 7.8 x 4.4	15.9	$109.95	$99.95	$89.95

25-Watt DC-to-DC Converters

- Input voltage: 9.2VDC-18VDC
- Built-in EMI filter, low ripple noise
- Size: 3.9"L x 3.9"W x 1.5"H • Voltage output adjustable
- Short-circuit, over voltage and overload protection
- Input/output connector: screw down terminals
- Mating connectors: P/N 103587 or P/N 103595, see web

175812

Part No.	Product No.	Output	1	10	25
175804	SD25A12	12V @ 2.1A	$39.95	$35.95	$32.95
175812	SD25A24	24V @ 1.1A	39.95	35.95	32.95

3 and 15-Watt DC-to-DC Converters

- Short-circuit/overcurrent protection
- One-year warranty

155918

Mean Well is an ISO-9001 Certified Company

Fig. 1
+Vin 23 | 2 -Vin
+Vin 22 | 3 -Vin
Common 16 | 9 Common
NC 15 | 10 NC
+Vout 14 | 11 -Vout

Fig. 2
+Vin 1 | 3 +Vout
-Vin 2 | 4 NC
| 5 GND
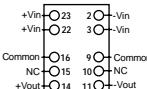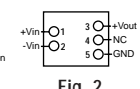
Part Number	Product Number	Fig.	Power (W)	Input Voltage Range (VDC)	Output Voltage (VDC)	Output Current (mA)	Ripple p-p (mV)	Pins	Size L" x W" x H"	1	10	50
155918	DCW03A05	1	3	9-18	+5/-5	300	100	8	1.2 x 0.7 x 0.5	$20.95	$18.89	$16.99
161701	DCW03A12	1	3	9-18	+12/-12	125	100	8	1.3 x 0.8 x 0.5	20.95	18.89	16.99
155707	SKE15A12	2	15	9-18	+12	1,250	60	4	2.0 x 2.0 x 0.4	34.95	31.19	28.15
155694	SKE15A24	2	15	9-18	+24	625	80	4	2.0 x 2.0 x 0.4	35.95	32.39	29.15

3 and 50 Watt DC-to-DC Converters

- Over temperature, overvoltage and short-circuit protection

ASTEC

153736 **188218**

43 More Converters @ www.Jameco.com

Part Number	Manufacturer Cross Reference Number	Power (W)	Input Voltage	Input Range (VDC)	Output Voltage (VDC)	Output Current (A)	Ripple p-p (mV)	Pins	Size L" x W" x H"	1	10	50
153736	EPC1053	3	12	7.5-16	9	0.25	100	12	1.2 x 0.7 x 0.5	$3.59	$3.29	$2.95
188218	AK60A048L120F04G	50	48	36-75	12	4.0	150	8	2.4 x 2.3 x 0.5	22.95	19.95	19.95

Power Transformers

Split-Bobbin Power Transformers

Non-concentrically wound with primaries and secondaries side-by-side providing low capacitive coupling.
- Primary: 115/230VAC, 50-60Hz • PC terminal pin spacing for accurate placement
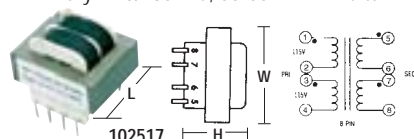
102517

Part Number	Mfr. Cross Ref. No.	Triad Cross	Input Voltage	VA Cap	Individual Output	Parallel Output	Series Output	Dimensions			Wt. (lbs.)	Pricing		
								L"	W"	H"		1	10	100
102517	XFR1602SB*	FS16150	115/230	2.4	8V @ .15A	8V @ .30A	16VCT @ .15A	1.17	1.38	1.20	0.3	$6.95	$6.25	$5.59
102592	XFR2405SB	FS24500	115/230	12.0	12V @ .50A	12V @ 1.0A	24VCT @ .50A	1.58	1.90	1.46	0.7	7.95	7.19	6.45

* Manufacturer and Product number may vary

Quick Connect Power Transformer

- Quick connect transformers are bobbin wound for smaller size and reduced electrostatic shielding requirements
- Terminals: quick connect, solder • Input voltage: 115/230VAC, 50-60Hz

Part Number	Mfr. Cross Ref. No.	Triad Cross	Input Voltage	Output Voltage	VA Cap	Size of Connect	Dimensions			Wt. (lbs.)	Pricing		
							L"	W"	H"		1	10	100
101864	XFR2424Q	FD724	115/230VAC	24VCT @ 2.4A	57.6	0.187"	1.87	2.70	2.25	1.7	$11.95	$10.79	$9.69
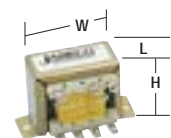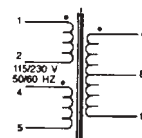
115VAC and 115/230VAC Power Transformers

Power transformers have both single and dual voltage input and center tapped outputs. This makes them the perfect choice for power supply design or for use in transformer, rectifier, and filter circuits.
- Primary: 115VAC or 115/230VAC, 50-60Hz * Center tap

115VAC 50-60Hz **Fig.1**
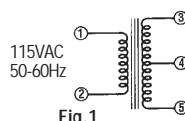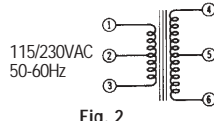
115/230VAC 50-60Hz **Fig. 2**
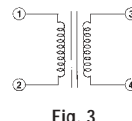
Fig. 3
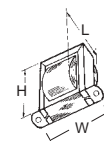
29225

Part Number	Mfr. Cross Ref. No.	Triad Cross	Primary				Secondary				Lead Type	Fig.	Dimensions			Wt. (lbs.)	Pricing		
			Voltage	Color Code			Voltage	Color Code					L"	W"	H"		1	10	100
29225	XFR122	F44X	115VAC	Yellow	—	Yellow	12.6VCT @ 2A	Blue	Red*	Black	Wire	1	2.12	2.33	1.96	1.5	$9.95	$8.99	$8.09
102120	XFR124	F181U	115VAC	Black	—	Black	12.6VCT @ 4A	White	Black*	White	Wire	1	2.53	3.08	2.61	2.7	12.95	11.69	10.49
112512	XFR242N	F229X	115VAC	Black	—	Black	24VAC @ 2A	White	—	White	Wire	3	1.75	2.75	2.25	1.8	9.79	8.85	7.95
102162	XFR6102	F314X	115/230VAC	Black	Yellow*	Red	6.3VCT @ 1.2A	White	Black*	White	Wire	2	1.56	1.96	1.67	0.8	8.49	7.65	6.89
102111	XFR2410	F346X	115/230VAC	Black	Yellow*	Red	24VCT @ 1A	White	Black*	White	Wire	2	2.22	2.33	1.97	1.5	7.95	7.15	6.45

120VAC to 120VAC Isolated Transformer

300VA
- Input voltage: 120VAC @ 60Hz
- Input connector: 5.5' cord with 2-prong plug
- Output voltage: 120VAC @ 2.5A (isolated)
- Size: 4.2"H x 3.2"W x 4.6"D
- Weight: 7.0 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	100
181315	ITR300	$39.95	$35.99	$32.39

More Variable Transformers @ www.Jameco.com

AEEC 110VAC Variable AC Transformers

- Input voltage: 110VAC @ 60 Hz
- Power: 500 and 2000VA
- Output voltage: 0 to 130VAC
- Output analog voltmeter
- Input conn.: 3-prong plug w/ 5' cord
- Output conn.: 3-prong outlet type
- Lighted on/off power switch

169640: • 5A @ 250V fuse
- Size: 8.3"L x 6.5"W x 7.0"H
- Weight: 15.6 lbs.

169658: • 20A @ 250V fuse
- Size: 9.8"L x 8.0"W x 7.0"H
- Weight: 26.5 lbs.

169640

169658

Part No.	Description	1	10	50
169640	500VA transformer	$74.95	$67.49	$60.75
169658	2000VA transformer	124.95	112.49	101.25

110/220VAC Variable AC Transformers

- Input: 110VAC or 220VAC
- Power: 500-2000VA
- Output: 0-240VAC
- Banana/screw input terminals
- Universal US/European output plugs
- Lighted on/off power switch

121275

Part No.	Fuse	Size (L" x W" x H")	Wt. (lbs.)
121275	3A/250V (P/N 69438)	5.3 x 7.3 x 7.0	10.4
129007	5A/250V (P/N 10401)	9.4 x 6.5 x 7.7	14.8
152581	10A/250V (P/N 69462)	9.0 x 7.0 x 7.7	19.8

Part No.	Description	SALE 1	10	50
121275	500VA transformer	$79.95	$69.95	$62.95
129007	1000VA transformer	149.95	112.55	78.79
152581	2000VA transformer	174.95	158.45	139.95

Power Entry Filters

- Frequency: 50/60Hz
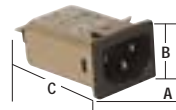
Fig.1 (146907)

40601
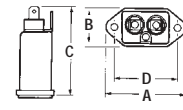
Fig. 2 (Fast-on Terminals)
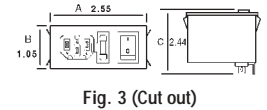
Fig. 3 (Cut out)

Part Number	Mfr. Cross Ref. No.	Corcom Cross	Description	Fig.	Current (Amps)	Voltage (VAC)	Terminals	Agency Approvals	Terminal Size	Dimension (inches)				Pricing			
										A	B	C	D	1	10	100	500
146907	03DENG3B*		Power entry filter (snap-in)	1	3	250	fast-on	UL/CSA/VDE	.25"	1.25	0.95	2.23	N/A	$4.95	$4.49	$3.95	$3.59
40601	03AE1*	3EF1F	Power entry filter, straight (flanged)	2	3	250	fast-on	UL/CSA/VDE	.25"	1.97	0.90	2.16	1.58	7.49	6.69	5.99	5.39
167441	10AE1	10EF1F	Power entry filter, straight (flanged)	3	10	250	fast-on	UL/CSA	.25"	1.97	0.89	2.65	1.58	8.95	8.09	7.25	6.55

* Manufacturer may vary

Computer and Power Cords

- Molded connectors
- Excellent resistance to jacket abrasion
- Temperature: -20°C to +60°C
- Voltage rating: 300 volts

AWG	Volts	Amps	VA
18	125	10	1250
16	125	12	1500
14	125	15	1875

Configuration 8 Laptop Power Cord (Fig. 1)

Power Cord w/ pigtail (Fig. 2)

RFI Power Cord (Fig. 3)

Right Angle Computer Power Cord (Fig.4)

Hospital Grade Cord (Fig. 5)

Part Number	Mfr. Cross Reference No.	Description	Weight (lbs.)	Agency Approvals	Plug Fig.	Length	Color	AWG	Cord Type*	Pricing			
										1	10	100	250
189587	VW-1	2-conductor "8" style power cord for laptops and power supplies	.30	UL/CSA	1	6'	Black	18/2	SPT-2	$2.95	$2.35	$1.79	$1.25
37997	17236	3-conductor power cord with pigtail	.30	UL/CSA	2	6'	Black	18/3	SVT	2.79	2.32	2.11	1.99
38041	17249	3-conductor detachable power supply cord	.37	UL/CSA	3	6'	Beige	18/3	SVT	3.49	3.15	2.79	2.49
38050	17250	3-conductor detachable power supply cord	.36	UL/CSA	3	6'	Black	18/3	SVT	3.95	3.35	2.75	2.25
125541	17504	3-conductor detachable power supply cord	.71	UL/CSA	3	6' 7"	Black	14/3	SJT	5.39	4.35	3.25	2.25
38076	17250R	3-conductor detachable right angle power supply cord	.54	UL/CSA	4	6'	Black	18/3	SVT	3.49	2.79	2.09	1.49
115078	17006	3-conductor power cord w/ hospital grade male (green dot)	.84	UL/CSA	5	10'	Black	16/3	SJT	8.95	8.09	7.25	6.55

* Thermoplastic Cord Jacket Type: Light duty; SPT-2 (Flat): Junior duty; SVT (Round): Light service; SJT (Round): Junior service

International Step-Up/Step-Down Transformers

- Wide selection to meet your power requirements

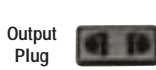**Fig. 1**   **Fig. 2**   **Fig. 3**

Fig. A Plug   **Fig. B Plug**   **Output Plug**

Part Number	Mfr. Cross Ref. No.*	Fig.	Primary Voltage	Secondary Voltage	Power (VA)	Dimensions			Weight (lbs.)	Pricing		
						H"	W"	D"		1	10	100
99573	AC110V50	1/A	220VAC	110VAC	50	2.50	1.63	1.33	0.7	$8.95	$6.75	$4.75
85016	AC110V300	3/A	220VAC	110VAC	300	3.50	3.05	3.95	4.8	27.95	24.95	22.49
111851	AC110V500	2/A	220VAC	110VAC	500	3.99	3.60	4.84	8.5	34.95	31.49	28.95
142906	AC110V1500	2/A	220VAC	110VAC	1500	5.25	4.50	5.75	15.2	79.95	71.95	64.95
85008	AC220V300	3/B	110VAC	220VAC	300	3.50	3.05	3.95	4.8	27.95	24.95	22.49

* Manufacturer may vary

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Look for Jameco's complete selection of International Power Cords.

Part Number Color Code Legend — Sale Refurbished Closeout

Part Number Color Code Legend: **Sale** **Refurbished** **Closeout**

AC/DC Table-Top Power Supplies

- Regulated and unregulated outputs see "**output plug**"
- Input voltage: 100-240VAC @ 50-60Hz

Power cords – see page 19

Stripped   Female

Polarity 1 (center negative)
Polarity 2 (center positive)

136565   155213   191901

Part Number	Mfr. Cross Reference No. ▲	Output			Output Plug ID x OD/Plug Type/Polarity	Power Indicator	Color	Size (L" x W" x H")	Cord (DC/AC)	Wt. (lbs.)	Agency Approvals	Pricing			
		Volts (VDC)	Current (A)	Watts (W)								1	10	50	100
169121	AD740U1050	5	4.0	20	2.5mm x 5.5mm female **2** (regulated)	No	Black	4.1 x 2.6 x 1.6	4'/ [1]	1.4	UL/CUL/TUV/CE	$27.95	$24.95	$22.49	$19.95
136565	DDC1210P†	12	1.0	12	Stripped & Tinned	No	Black	3.2 x 2.2 x 1.9	6'/6'	1.2	—	11.95	10.79	9.69	8.35
161576	MA15-120R	12	1.25	15	2.1mm x 5.5mm female **2** (regulated)	No	Black	3.3 x 2.0 x 1.3	4'/6'	0.4	UL/CSA/TUV	26.95	24.29	21.85	19.65
140880	DC1215ST†	12	1.5	18	Stripped & Tinned	No	Black	3.1 x 2.1 x 1.9	6'/6'	1.5	UL	10.95	9.95	8.95	7.95
183054	SPU24-3	12	1.5	18	2.5mm x 5.5mm female **2** (regulated)	Yes	Black	4.2 x 2.6 x 1.2	6'/ [1]	0.5	UL/CUL/TUV/CE	26.49	21.19	15.89	11.15
143714	DC1220F1†	12	2.0	24	2.1mm x 5.5mm female **2**	No	Black	3.8 x 2.8 x 2.3	6'/6'	2.2	—	14.95	13.49	12.15	10.95
191901	CUP36-12	12	2.5	30	2.5mm x 5.5mm rt angle fem **2** (regul)	No	Black	4.4 x 2.0 x 0.8	4'/ [2]	0.7	UL/CSA/TUV/CE	27.95	24.95	22.49	19.95
155213	P40A-3P2JU	12	3.3	40	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	5.5 x 2.3 x 1.5	6'/6'	0.7	UL/CUL/TUV	34.95	31.49	27.95	24.95
155230	SPU50-3	12	5.0	60	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	5.6 x 2.9 x 1.5	6'/6'	1.3	UL/CSA/TUV	49.95	44.95	39.95	35.95
173593	UPS30215P*	15	2.0	30	2.5mm x 5.5mm female **2** (regulated)	Switch	Black	6.8 x 4.3 x 2.2	6'/ [1]	1.2	UL/CSA/TUV	27.95	24.95	22.95	20.95
169076	808050-00	20	2.5	50	2.1mm x 5.5mm female **2** (regulated)	No	Black	6.7 x 3.3 x 2.3	6'/ [1]	1.4	UL/CSA/TUV	29.95	23.95	17.95	12.59
181884	P40A6P2J	24	1.66	40	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	4.1 x 2.6 x 1.4	6'/6'	0.7	UL/TUV/CE	33.95	30.59	27.55	24.75
161605	SPU50-6	24	2.5	60	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	5.6 x 2.9 x 1.6	1'9'/6'	1.3	UL/CSA/TUV	44.95	39.95	35.95	32.95
173665	DND-3005†	30	0.5	15	2.5mm x 5.5mm female **2** (regulated)	No	Black	8.3 x 2.5 x 2.2	5'9'/3'2"	1.4	UL/CUL	13.29	10.65	7.95	5.59
172064	SPU50-9	48	1.25	50	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	5.6 x 2.9 x 1.7	6'/6'	1.3	UL/CSA/TUV	49.95	44.95	39.95	35.95

† 120VAC input only   * Has on/off switch   ▲ Manufacturer may vary   [1] Use P/N 38050 (pg 19) power cord   [2] Use P/N 189587 (pg 19) power cord

MOTOROLA 5.6-Watt Linear Wall Regulated DC Power Supply

- Output voltage:
  +5VDC @ 500mA
  +12VDC @ 130mA
  -12VDC @ 130mA
- Input voltage:
  120VAC @ 60Hz
- Input conn.: 3-prong AC wall plug

NC +5VDC
NC GND
-12VDC +12VDC
NC

SALE

Part No.	Product No.	1	10	50	100
154624	5712-305-4C3E ...	$11.49	$9.19	$6.89	$4.85

ELPAC 72-Watt Table-Top Switching Power Supply

- Output voltage:
  +12VDC @ 6A
- Input voltage:
  95-250VDC @ 47-63Hz
- Input: 6' power cord (included)
- Mating output connector:
  5-pin DIN female connector, P/N 180873, see web

GND +12VDC @ 6A
GND +12VDC @ 6A
GND

Part No.	Product No.	1	10	50	100
182959	W7212	$54.95	$43.99	$32.99	$23.09
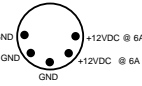
38 More @ www.Jameco.com/xfmr

Jameco carries a huge selection of Table-Top Power Supplies. See our website for more.

Part Number	Mfr. ▲	Product Number ▲	Watts (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector/Cord	Output Connector/Cord	Certification	Size L" x W" x H"	Wt. (lbs.)	Type/Color	Mode†	Pricing			
													1	10	50	100
116089	Atari	C070042	5.0	+5/1	115 @ 60	2-prong/6' cord	7-pin DIN M/6'	UL	3.4 x 2.7 x 2.3	1.6	Table/Black	L	$8.39	$6.75	$5.09	$3.55
154624	Motorola*	5712-305-4C3E	5.6	+5/0.5, +12/0.13, -12/0.13	120 @ 60	3-prong wall plug	8-pin mini DIN M/6'	UL/CSA	2.9 x 2.6 x 1.9	1.2	Wall/Black	L	11.49	9.19	6.89	4.85
155651	Globtek	TR2V100MD8	12.2	+5/1, +12/0.3, -12/0.3	120 @ 60	3-prong/6' cord	8-pin mini DIN M/6'	UL	4.5 x 3.0 x 2.5	2.6	Table/Black	L	9.69	8.69	7.79	6.99
189843	ACI World	EPA201D12	20.0	+12/1.66	100-240 @ 50-60	3-prong recep./**	8-pin mini DIN M/3'4"	UL/CSA/TUV/CE	4.3 x 2.3 x 1.3	1.0	Table/Black	S	9.95	7.99	5.99	4.19
190959	Mean Well	P25A13D	25.7	+5/2.5, +12/0.8 -12/0.3	100-240 @ 47-63	3-prong/6' cord	5-pin DIN M/6'	CUL/TUV/CE	4.1 x 2.6 x 1.4	1.1	Table/Black	S	37.95	33.95	30.95	27.95
182959	Elpac*	W7212	72.0	+12/6	95-250 @ 47-63	3-prong/6' cord	5-pin DIN F/6'	UL/CSA/CE	6.2 x 3.8 x 2.6	2.5	Table/Black	S	54.95	43.99	32.99	23.09

* See photo above   ** Use P/N 38050 (pg 19) power cord   † S = switching; L = linear   ▲ Mfr. and Product Number may vary

AC to AC Wall Transformers

- Input: 120VAC @ 60Hz   • Current rating up to 1.85A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 34 for wall transformer enclosures

SALE

We will change any power plug (see web) on any AC wall transformer listed (100 piece minimum)

101127   Female Male   185439   10102

Part Number	Mfr. Cross Reference No.▲	Output Rating		Output Plug ID x OD (mm) Plug Type	Dimensions (in.) (±10%)			Output Cord Length	Weight (lbs.)	Agency Approvals	Pricing			
		Voltage	Current		H	W	D				1	10	50	100
101127	DFX10096B	7 VAC	1500 mA	2.5 mm x 5.5 mm female	1.88	2.20	1.95	7' 6"	0.8	UL/CSA	$4.95	$3.99	$2.99	$2.09
119204	A41090800	9 VAC	800 mA	2.1 mm x 5.5 mm female	2.55	1.91	1.7	6'	0.6	UL	4.95	3.99	2.99	2.09
112336	AC915F5	9 VAC	1500 mA	2.5 mm x 5.5 mm female	2.50	2.20	1.96	6'	0.9	UL	9.95	7.99	5.99	4.19
101258	41A12-500	12 VAC	500 mA	2.1 mm x 5.5 mm female	2.76	1.97	1.60	6'	0.6	UL/CSA	4.95	3.99	2.99	2.09
10081	AC1210F1	12 VAC	1000 mA	2.1 mm x 5.5 mm female	2.56	2.39	1.99	6'	0.7	UL/CSA	4.95	3.99	2.99	2.09
100167	AC1210F5	12 VAC	1000 mA	2.5 mm x 5.5 mm female	3.20	2.41	2.00	6'	0.7	UL/CSA	4.95	4.49	4.05	3.65
171408	AC1405F1	14 VAC	500 mA	2.1 mm x 5.5 mm female	2.76	1.97	1.60	6'	0.6	UL/CSA	4.95	4.49	3.95	3.49
185439	T5182200-A020G	18 VAC	1850 mA	2.1 mm x 5.5 mm right angle female	3.34	2.69	2.19	6'	1.7	UL/CSA	7.95	6.36	4.79	3.59
87581	AC2405F1	24 VAC	500 mA	2.1 mm x 5.5 mm female	2.50	2.24	1.92	6'	0.9	UL/CSA	5.49	4.39	3.29	2.35
140599	AC2410F1	24 VAC	1000 mA	2.1 mm x 5.5 mm female	3.00	2.20	1.90	6'	1.2	UL/CSA	8.95	8.09	7.25	6.55
10102	AC2410M3	24 VAC	1000 mA	3.5 mm male	3.00	2.20	1.90	6'	1.2	UL/CSA	8.95	8.09	7.25	6.55
176356	WP573024	24 VAC	1250 mA	2.1 mm x 5.5 mm female	3.36	2.67	2.20	5'8"	1.6	UL/CSA	9.49	7.59	5.69	3.95

▲ Manufacturer may vary

AC to DC Wall Transformers
Unregulated unless specified under "output plug"

- Input: 120VAC @ 60Hz
- Current rating up to 1.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 34 for wall transformer enclosures

cUL CSA UL

164101 **190529** Stripped Female Male **100853** **101291**

Polarity 1 (+) —•— (−) (center negative)

We will change any power plug (see web) on any DC wall transformer listed (100 pc. minimum)

Polarity 2 (−) —•— (+) (center positive)

Part Number	Mfr. Cross Reference No.*	Output Rating Volt. (VDC)	Output Rating Current	Output Plug ID x OD (mm) Plug Type / Polarity	Dimensions (in.) (±10%) H	W	D	Case Color	DC Cord Length	Wt. (lbs.)	Agency Approvals	Pricing 1	10	50	100
164101	DCR505F12	5	500 mA	2.1 mm x 5.5 mm female 2 (regulated)	2.76	2.02	1.59	Black	6'	0.6	UL/CSA	$8.95	$8.09	$7.25	$6.55
171301	JOD48U08	5	1000 mA	2.1 mm x 5.5 mm female 2 (regulated)	3.13	2.93	2.00	Black	6'	1.0	UL/CUL	9.95	8.95	7.95	6.95
168604	RWP480505	5	1000 mA	2.5 mm x 5.5 mm female 2 (regulated)	3.30	2.20	1.92	Black	6'	1.2	UL/CSA	11.95	10.79	9.69	8.69
101266	DC605F12	6	500 mA	2.1 mm x 5.5 mm female 2	2.44	1.89	1.61	Black	6'	0.4	UL/CSA	3.95	3.59	3.25	2.89
190529	AD9123	9	250 mA	2.5 mm x 5.5 mm rt. angle female 2 (reg)	2.47	2.02	1.60	Black	12'	0.5	UL/CSA	4.95	4.49	4.05	3.65
133891	DC903F1	9	300 mA	2.1 mm x 5.5 mm female 2	2.00	1.50	1.50	Black	6'	0.4	UL/CSA	3.95	3.19	2.39	1.69
140636	DC904F5	9	400 mA	2.5 mm x 5.5 mm female 2	2.58	2.00	2.00	Black	6'	0.6	UL/CSA	3.69	3.35	2.99	2.69
100853	DC905F12	9	500 mA	2.1 mm x 5.5 mm female 2	2.50	1.90	1.74	Black	6'	0.6	UL/CSA	4.49	4.05	3.65	3.29
100888	48-09-1000D	9	1000 mA	2.1 mm x 5.5 mm female 2	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	7.95	6.49	5.59	5.19
129322	DV1220DC	12	200 mA	2.5 mm x 5.5 mm right angle female 2	2.20	1.70	1.50	Gray	6'	0.4	UL/CSA	3.69	2.95	2.25	1.55
164283	HD1225	12	250 mA	Stripped & tinned w/ strain relief	2.18	1.69	1.49	Gray	6'	0.4	UL/CUL	3.49	3.15	2.85	2.45
102496	DC1205F12	12	500 mA	2.1 mm x 5.5 mm female 2	2.50	1.90	1.57	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
131300	SCP41	12	500 mA	2.1 mm x 5.5 mm right angle female 2	2.60	1.90	1.74	Beige	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
100870	DC1210F1	12	1000 mA	2.1 mm x 5.5 mm female 2	2.58	2.39	1.97	Black	6'	0.9	UL/CSA	7.95	6.95	6.25	5.59
170245	DCR1210F12	12	1000 mA	2.1 mm x 5.5 mm female 2 (regulated)	3.20	2.26	1.97	Black	6'	1.2	—	13.95	12.59	11.35	10.19
105478	DC1210F5	12	1000 mA	2.5 mm x 5.5 mm female 2	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	7.95	6.39	4.79	3.35
196445	YS1015U12	12	1250 mA	2.1 mm x 5.5 mm female 2 (regulated)	2.92	1.95	1.82	Black	5'	0.4	UL/CSA	11.95	9.59	7.19	4.95
191353	ADP-15FB	12	1250 mA	2.5 mm x 5.5 mm female 2 (regulated)	3.48	2.23	1.20	Black	10' (clear)	0.4	UL/CUL	14.95	11.95	8.95	6.95
101291	DC1215F5	12	1500 mA	2.5 mm x 5.5 mm female 2	3.40	2.70	2.20	Black	6'	1.5	UL	10.95	9.95	8.95	7.95
192786	MK135100	13.5	1000 mA	2.1 mm x 5.5 mm female 1	2.90	2.27	1.95	Black	6'	1.0	UL	10.95	8.79	6.59	4.65
190001	DC1505F1	15	500 mA	2.1 mm x 5.5 mm female 2	2.30	2.35	1.90	Black	6'	0.8	UL/CSA	6.95	5.59	4.19	2.95
155803	DC1506F11	15	600 mA	2.1 mm x 5.5 mm female 1	2.90	2.33	1.90	Black	6'	1.0	UL/CSA	7.95	7.19	6.45	5.85
191652	DC1510F12	15	1000 mA	2.1 mm x 5.5 mm female 2	3.26	2.20	1.90	Black	6'	1.0	UL/CSA	9.59	8.65	7.79	6.99
169391	WA15-150	15	1000 mA	2.1 mm x 5.5 mm female 2 (regulated)	2.90	1.90	1.60	Black	6'	0.5	UL/CUL	12.95	11.49	10.49	9.49
162317	DC1605F1	16	500 mA	2.1 mm x 5.5 mm female 2	2.23	2.35	1.90	Black	6'	0.8	UL/CSA	7.95	6.95	6.25	5.59
168487	KWM020188	18	1000 mA	2.1 mm x 5.5 mm female 2 (regulated)	2.91	1.94	1.62	Black	6'	0.4	UL/CUL	16.95	15.29	13.75	12.39
102285	DC2404F1	24	400 mA	2.1 mm x 5.5 mm female 2	3.00	2.30	2.00	Black	6'	0.9	UL/CUL	6.95	6.29	5.65	5.09

* Manufacturer may vary

Component Grab Bags

- Use our 20-drawer cabinet with labels to store your components, P/N 81701, pg 34
- Opened grab bags are not returnable

Cabinet – 81701

Capacitors **135394**

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
135394	GB102LB*	1.5 lb. assorted (300 pcs) electrolytic caps. radial, axial, snap (photo above)	1.5	$12.95	$11.49
17945	GB103	100 assorted tantalum capacitors (dipped epoxy and solid tubular)	0.1	9.95	8.95

Integrated Circuits **135280**

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
135280	GB108LB*	1 lb. (400 pcs) asst. 7400, 74LS00 series (74, 74C, 74F, 74S, 74ALS, 74HC, 74HCT)	1.0	16.95	$14.95
145242	GB109LB*	2 lb. (300 pcs) asst. linear series (LM300, 500, 700, 7800, 7900 reg.)	2.0	16.95	14.95

LEDs **18041**

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18041	GB110	100 assorted sizes & colored LEDs (T1/T1 3/4 round and rectangular)	0.1	$6.95	$6.29
18323	GB186	500 asst. sizes #18041 LEDs	0.3	19.95	17.95
135271	GB110LB*	1 lb. (1900 pcs) asst. #18041 LEDs	1.0	44.95	40.95

1/4W Resistors **135351**

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
135351	GB116LB*	1 lb. (2000 pcs) asst. 1/4W resistors	1.0	$14.95	$13.49

* LB grab bag quantities are approximate

Hardware Assortment

- 2-56 • 4-40 • 6-32 • 8-32 • Screws
- Nuts • Washers • Steel • Brass • Lock Washers • Aluminum • Plastic

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
171635	GB149LB*	3 lbs. (1400 pcs) assorted types of screws	3.0	$12.95	$11.49	$9.95

Schwab's School Selection

A selection of Jameco's nine most popular Grab Bags, all individually bagged. North Dakota Engineer, Loren Schwab, recommended this selection of products as a standard item. He also recommends a 20-drawer component cabinet with labels (81701 photo above) for storage.

$56.63 Value

Includes: Ceramic and electrolytic capacitors, diodes, transistors, potentiometers, switches, LEDs, 1/4W resistors, spacers and standoffs.

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
163213	GB197	Schwab's School Selection	3.3	$39.95	$34.95
81701	CAB20	20-drawer component cabinet	4.7	15.95	13.95

Surprise Component Grab Bag

Our Best Seller!

Axial and radial electrolytics, monolithic, dipped silver mica and mylar capacitors, connectors, sockets, thermistors, LEDs, resistor networks, diodes, ICs, standoffs, transistors, oscillator/resonators, inductors, crystals, resistors, pots and switches (1075 pcs).

Part No.	Cross Ref. No.	Description	1	10	25
135263	GB191LB*	3 lbs. electronic components	$17.95	$15.95	$13.95

* LB grab bag quantities are approximate

Part Number Color Code Legend
Sale Refurbished Closeout

Kits include the Most Popular Components and a Cabinet with extra drawers for your Customized Expansion

Each Kit includes a 20-Drawer Component Cabinet (81701), 20 clear plastic drawers (85454), 20 clear dividers (85446), 30 adhesive labels for drawers to identify parts in kit, and all the Electronic Components listed in each kit.

20-drawer component cabinet with every kit!

• Cabinet size: 6.0"L x 15.0"W x 7.9"H
• Drawer size: 5.5"L x 2.7"W x 1.5"H
• Cabinet is wall-mountable or free standing
• Cabinet: ABS-Black
• Weight: 4.6 to 6.4 lbs.

Need a refill? Just call 1•800•455•6119

See website for refill kits www.Jameco.com

81875 (Capacitor Kit)

85059 (Switch Kit)

1/2-Watt Single Turn Cermet Pot Kit — SAVE $20

Includes 100 pcs. (10 values) 1/2-watt Linear Taper Potentiometer

10 each	10 each	10 each	10 each	10 each
63P500Ω	63P5kΩ	63P500kΩ	63P1kΩ	63P50kΩ
63P2kΩ	63P20kΩ	63P1MΩ	63P10kΩ	63P100kΩ

Part No.	Description	Wt. (lbs.)	1	10
85032	100 pcs. single turn Pot kit	4.9	$59.99	$53.99

3/4-Watt 15 Turn Cermet Pot Kit — SAVE $34

Includes 100 pcs. (10 values) 3/4-watt Linear Taper Potentiometer

10 each	10 each	10 each	10 each	10 each
43P500Ω	43P5kΩ	43P500kΩ	43P1kΩ	43P50kΩ
43P2kΩ	43P20kΩ	43P1MΩ	43P10kΩ	43P100kΩ

Part No.	Description	Wt. (lbs.)	1	10
85041	100 pcs. 15 turn Pot kit	4.9	$79.99	$71.99

Switch Assortment Kit — SAVE $60

Includes 150 pcs. (15 types) PB, Slide, Dip & Toggle Switches

10 each	10 each	10 each	10 each	10 each
206-4	JMT121	JMT223	MPC221	MS103
206-8	JMT123	MPC121	MPC223	SDTX620K
JMT113	JMT221	MPC123	MS102	SW153

Part No.	Description	Wt. (lbs.)	1	10
85059	150 pcs. Switch kit	5.0	$89.99	$80.99

Hardware and Spacer Assortment Kit — SALE — SAVE $33

Includes 2400 pcs. (24 types) Spacers, Nuts, Flat, Tooth & Lock Washers and Slotted PH Screws

100 each	100 each	100 each	100 each	100 each	100 each
Spacers	Hex nuts	Flat,	Int. tooth,	Split lock	PH machine screws
—	2-56	—		#2	2-56 x 1/4, —
4-40	4-40	#4	#4	#4	4-40 x 1/4, 1/2
6-32	6-32	#6	#6	#6	6-32 x 1/4, 1/2
8-32	8-32	#8	#8	#8	8-32 x 3/8, 1/2

Part No.	Description	Wt. (lbs.)	1	10
108433	2400 pcs. Hardware kit	7.5	$59.95	$53.95

Ceramic Disc Capacitor Kit — SAVE $19

Includes 520 pcs. (10 values) 50v ±20% Ceramic Disc Capacitors

20 each	20 each	20 each	100 each	100 each
10pF	47pF	470pF	.022µF	.01µF
22pF	100pF	.001µF	.047µF	.1µF

Part No.	Description	Wt. (lbs.)	1	10
81859	520 pcs. Ceramic Capacitor kit	5.0	$29.95	$26.95

Monolithic Ceramic Capacitor Kit — SAVE $6

Includes 280 pcs. (10 types) 50v ±20% Monolithic Ceramic Capacitors

10 each	10 each	10 each	10 each	100 each
22pF	.001µF	.047µF	.47µF	.01µF
100pF	.0022µF	.22µF	1µF	.1µF

Part No.	Description	Wt. (lbs.)	1	10
171475	280 pcs. Monolithic Cap kit	5.0	$34.99	$31.49

Radial Electrolytic Capacitor Kit — SAVE $13

Includes 240 pcs. (15 values) ±20% Radial Electrolytic Capacitors

10 each	10 each	20 each	20 each	20 each
100µF @ 50v	1000µF @ 16v	1µF @ 50v	3.3µF @ 50v	22µF @ 50v
220µF @ 25v	2200µF @ 25v	1µF @ 100v	4.7µF @ 50v	47µF @ 50v
470µF @ 25v	3300µF @ 25v	2.2µF @ 50v	10µF @ 50v	100µF @ 25v

Part No.	Description	Wt. (lbs.)	1	10
81867	240 pcs. Radial Cap. kit	5.3	$29.99	$26.99

Axial Electrolytic Capacitor Kit — SAVE $13

Includes 140 pcs. (10 values) ±20% Axial Electrolytic Capacitors

10 each	10 each	10 each	20 each	20 each
47µF @ 50v	220µF @ 50v	1000µF @ 25v	1µF @ 50v	10µF @ 50v
100µF @ 50v	470µF @ 50v	2200µF @ 16v	4.7µF @ 50v	2.2µF @ 50v

Part No.	Description	Wt. (lbs.)	1	10
81875	140 pcs. Axial Capacitor kit	5.3	$39.99	$35.99

Mylar Capacitor Kit — SAVE $10

Includes 280 pcs. (10 values) 100v ±10% Mylar Capacitors

10 each	10 each	10 each	10 each	100 each
.001µF	.022µF	.047µF	.47µF	.01µF
.0047µF	.033µF	.22µF	1µF	.1µF

Part No.	Description	Wt. (lbs.)	1	10
81883	280 pcs. Mylar Capacitor kit	5.1	$39.99	$35.99

Dipped Tantalum Capacitor Kit — SALE — SAVE $48

Includes 150 pcs. (15 values) ±20% Dipped Tantalum Capacitors

10 each	10 each	10 each	10 each	10 each
.1µF @ 35v	1µF @ 25v	3.3µF @ 35v	10µF @ 16v	22µF @ 16v
.22µF @ 35v	1µF @ 35v	4.7µF @ 35v	10µF @ 35v	33µF @ 25v
.47µF @ 35v	2.2µF @ 16v	6.8µF @ 35v	15µF @ 25v	47µF @ 25v

Part No.	Description	Wt. (lbs.)	1	10
81841	150 pcs. Tantalum Capacitor kit	4.8	$74.95	$67.95

Transistor Assortment Kit — SAVE $35

Includes 560 pcs. (20 types) NPN, PNP (High/Medium/Low Power) Transistors

10 each	10 each	10 each	10 each	100 each
2N2222A	2N4401	MJE3055T	TIP31A	2N3904
2N2907A	2N4403	MPF102	TIP32A	2N3906
2N3053	2N5951	MPSA06	TIP102	PN2222
2N3055	2N7000	MPSA13	TIP120	PN2907

Part No.	Description	Wt. (lbs.)	1	10
82595	560 pcs. Transistor kit	5.1	$79.99	$71.99

7400 Series IC Kit — SAVE $52

Includes 350 pcs. (30 types) 7400 (TTL) Integrated Circuits

10 each	10 each	10 each	10 each	10 each	20 each
7402	7416	7438	74107	74157	7400
7405	7417	7447	74123	74160	7404
7408	7420	7470	74132	74174	7406
7410	7430	7485	74151	74175	7407
7414	7432	7495	74153	74279	7474

Part No.	Description	Wt. (lbs.)	1	10
84953	350 pcs. 7400 IC kit	6.2	$139.95	$125.95

Kits include the Most Popular Components and a Cabinet with extra drawers for your Customized Expansion

Each Kit includes a 20-Drawer Component Cabinet (81701), 20 clear plastic drawers
(85454), 20 clear dividers (85446), 30 adhesive labels for drawers to identify parts in kit,
and all the Electronic Components listed in each kit.

81875 (Capacitor Kit)

20-drawer component cabinet with every kit!

- Cabinet size: 6.0"L x 15.0"W x 7.9"H
- Drawer size: 5.5"L x 2.7"W x 1.5"H
- Cabinet is wall-mountable or free standing
- Cabinet: ABS-Black
- Weight: 4.6 to 6.4 lbs.

See website for refill kits www.Jameco.com

Need a refill? Just call 1•800•455•6119

108433 (Hardware Kit)

74LS Series IC Kit

SAVE $37

Includes 420 pcs. (35 types) 74LS (TTL) Integrated Circuits

10 each	10 each	10 each	10 each	20 each
74LS05	74LS73	74LS125	74LS193	74LS00
74LS10	74LS75	74LS139	74LS240	74LS02
74LS11	74LS85	74LS151	74LS244	74LS04
74LS14	74LS86	74LS155	74LS245	74LS08
74LS20	74LS90	74LS157	74LS273	74LS32
74LS30	74LS93	74LS174	74LS373	74LS74
74LS47	74LS123	74LS175	74LS374	74LS138

Part No.	Description	Wt. (lbs.)	1	10
84961	420 pcs. 74LS IC kit	6.7	$119.99	$107.99

CD4000 Series IC Kit

SAVE $31

Includes 300 pcs. (25 types) CD4000 Series Integrated Circuits

10 each	10 each	10 each	10 each	20 each
CD4015	CD4024	CD4051	CD4093	CD4001
CD4016	CD4027	CD4069	CD4511	CD4011
CD4017	CD4040	CD4070	CD4538	CD4013
CD4020	CD4046	CD4071	CD4543	CD4049
CD4023	CD4050	CD4081	CD4584	CD4066

Part No.	Description	Wt. (lbs.)	1	10
84970	300 pcs. CD4000 series IC kit	6.1	$79.95	$71.95

Linear Series IC Kit

SAVE $51

Includes 480 pcs. (40 types) Linear Series Integrated Circuits

10 each	10 each	10 each	10 each	20 each
TL072CP	LM337T	LF412CN	ULN2803A	LM317T
TL074CN	LF353N	LMC555CN	NE5532	LM324N
TL082CP	LF356N	LM556N	7808T	LM339N
TL084CN	LM358N	LM723CN	78L12	LM741CN
MAX232CPE	LM386N-1	LM1458N	7815T	LM555CN
LM301N	LM386N-3	LM1488N	7905T	7805T
LM308N	LM393N	LM1489N	7912T	78L05
LM311N	LF411CN	ULN2003A	7915T	7812T

Part No.	Description	Wt. (lbs.)	1	10
84988	480 pcs. Linear IC kit	6.0	$189.95	$169.95

Grab Bag Refill Kits @ www.Jameco.com

LEDs & LED Mounting Hardware Kit

SAVE $43

See pages 10 & 11 for photos and specs.

Includes 560 pcs. (20 types) LEDs and mounting hardware

10 each	10 each	10 each	10 each	100 each
BG209	BR5704	XC209G	XC556G	LMH100
BR209	CTP280	XC209Y	XC556Y	LMH200
BY209	HLMT-CL00	XC410G	XC5410	XC209R
BG5704	XC52RG	XC410R	XC5491	XC556R

Part No.	Description	Wt. (lbs.)	1	10
84996	560 pcs. LED & Hardware kit	5.0	$59.95	$49.95

1/8-Watt Carbon Film Resistor Kit

SALE

Includes 540 pcs. (30 values) 1/8-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.5kΩ	3.3kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	2Ω	5.1kΩ	22kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2.2kΩ	5.6kΩ	27kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.7kΩ	6.8kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
108329	540 pcs. 1/8-watt Resistor kit	4.9	$24.95	$22.49

1/4-Watt Carbon Film Resistor Kit

Includes 540 pcs. (30 values) 1/4-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.2kΩ	2.7kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	1.5kΩ	3.3kΩ	20kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2kΩ	5.1kΩ	22kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.2kΩ	5.6kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
81832	540 pcs. 1/4-watt Resistor kit	4.9	$27.95	$24.95

1/2-Watt Carbon Film Resistor Kit

Includes 540 pcs. (30 values) 1/2-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.5kΩ	3.3kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	2kΩ	5.1kΩ	22kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2.2kΩ	5.6kΩ	27kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.7kΩ	6.8kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
107879	540 pcs. 1/2-watt Resistor kit	5.1	$29.95	$26.95

5mm x 20mm Minature Fuses

Fast Acting (250V) GMA Fuses

- Recommended for new designs
- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Amps	Mfr.	10	100	500	1000
103886	250mA	Various	$.20	$.15	$.11	$.10
102040	500mA	Various	.20	.15	.11	.10
103907	1 amp	Various	.20	.15	.11	.10
103915	2 amp	Various	.20	.15	.11	.10
103923	3 amp	Various	.20	.15	.11	.10
103931	5 amp	Various	.20	.15	.11	.10

5mm x 20mm Miniature Low-Profile Fuse Holder

- Accepts 5 x 20mm fuses
- 10A @ 250VAC
- Size: 1.4"L x 0.6"Dia.
- D Style mounting hole: 1 ea. 0.5"Dia x .46" flat

Part No.	Description	1	10	100
102832	Fuse holder UL/CSA	$1.75	$1.57	$1.39

54 More Fuses @ www.Jameco.com

140-Watt DC-AC Inverter
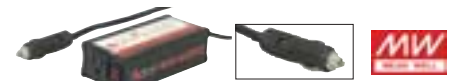
- Input voltage: 10-15VDC
- Output voltage: 110VAC @ 60Hz
- Battery low shutdown   • Peak power surge capable
- Overload & high grade thermal protection
- Size: 5.5"L x 2.6"W x 1.6"H   • Weight: 1.3 lbs.

Part No.	Description	1	10	25
188293	Cigarette plug	$49.95	$44.95	$39.95

Part Number Color Code Legend Sale Refurbished Closeout

Miniature Toggle Switches
• Mounting hole diameter: 1/4"
Includes: Mounting hardware

Figure 1   B

Figure 2   A B

Figure 3   L W D
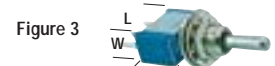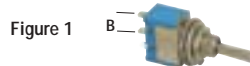
Part Number	Mfr. Cross Ref. No.	Fig.	Pins	Type ( ) Momentary		Dimensions L" x W" x D"	Lead Spacing A"	B"	C"	Contact Rating	Lead Type	Lever Type	Pricing 1	10	100	250	OEM 1000
76523	JMT113	1	2	SPST	on-off	.52 x .32 x .38	—	.185	—	6A @ 125VAC & 3A @ 250VAC	Solder lugs	Round	$1.15	$1.03	$.93	$.75	$.65
21936	JMT123	3	3	SPDT	on-on	.52 x .32 x .38	—	.185	—	5A @ 125VAC & 2A @ 250VAC	Solder lugs	Round	1.15	1.03	.93	.75	.65
22832	LFH123	3	3	SPDT	on-on	.52 x .28 x .36	—	.185	—	5A @ 125VAC & 2A @ 250VAC	Solder lugs	Flat	1.15	1.05	.95	.85	.75
21979	JMT223	2	6	DPDT	on-on	.52 x .52 x .38	.20	.185	—	5A @ 125VAC & 2A @ 250VAC	Solder lugs	Round	1.49	1.29	1.15	.99	.59
75900	SWM133	2	6	DPDT	on-on	.52 x .52 x .38	.20	.185	—	6A @ 125VAC & 3A @ 250VAC	Solder lugs	Round	1.49	1.35	1.25	.99	.85
21952	JMT221	2	6	DPDT	on-off-on	.52 x .52 x .38	.20	.185	—	6A @ 125VAC & 3A @ 250VAC	Solder lugs	Round	1.29	1.16	1.04	.89	.75
75951	SWM130	2	6	DPDT	(on)-off-(on)	.52 x .52 x .38	.20	.185	—	6A @ 125VAC & 3A @ 250VAC	Solder lugs	Round	1.49	1.35	1.25	.99	.89
26358	MPC221	2	6	DPDT	on-off-on	.52 x .52 x .38	.20	.185	—	5A @ 125VAC & 2A @ 250VAC	PC	Round	1.29	1.16	1.04	.89	.75

Subminiature Toggle Switches
• Mounting hole diameter: 7/32"
• Pre-tinned leads
• Metal construction
Includes: Mounting hardware

Figure 1   B A

Figure 2   A

Figure 3   A D L W

Part Number	Mfr. Cross Ref. No.	Fig.	Pins	Type		Dimensions L" x W" x D"	Lead Spacing A"	B"	Contact Rating	Lead Type	Lever Type	Pricing 1	10	100	250	OEM 1000
106067	SWP124	1	3	SPDT	on-on	.25 x .33 x .40	.20	.10	30mA @ 5VDC	PC right angle	Round	$1.75	$1.59	$1.39	$1.25	$1.15
72160	SW1501	2	2	SPST	on-off	.33 x .21 x .33	.10	—	1.5A @ 250VAC	Solder lugs	Round	1.25	1.15	.99	.85	.69
75969	SWM136	2	3	SPDT	on-on	.33 x .21 x .33	.10	—	3A @ 125VAC	Solder lugs	Round	1.35	1.25	1.05	.75	.55
72557	SW1502	2	3	SPDT	on-off-on	.33 x .21 x .33	.10	—	1.5A @ 250VAC	Solder lugs	Round	1.35	1.25	1.05	.75	.55
138907	SW1503	2	6	DPDT	on-off-on	.36 x .37 x .33	.10	—	3A @ 120VAC	Solder lugs	Round	1.29	1.05	.85	.65	.55
75977	SWM137	3	6	DPDT	on-on	.33 x .37 x .33	.17	.10	1.5A @ 250VAC	Solder lugs	Round	1.29	1.05	.85	.65	.55

Pushbutton Switches
• Contact rating: 3A @ 125VAC   • 2-pins   • Lead type: solder terminal

Mountain Switch   SALE

Miniature Soft Touch Switch

Part No.	Product No.	Fig.	Type ( ) Momentary	Dimensions	Lead Spacing	Thread Diameter	Button Color	Pricing 1	10	100	1000
164486	DS463R	1	SPST off-(on)	1.2"L x .59"Dia.	.175"	.387"	Red	$1.69	$1.55	$1.39	$1.25

Figure 1

Standard Touch Switch

Part No.	Product No.	Fig.	( ) Momentary	Dimensions	Lead Spacing	Thread Diameter	Button Color	Pricing 1	10	100	1000
164582	DS016B	2	SPST off-(on)	.88"L x .46"Dia.	.220"	.354"	Black	$1.49	$1.39	$1.25	$1.15

Figure 2

Pushbutton Switches
• Pins: 2   • Normally open and closed configurations   • Momentary action pushbutton switches
Includes: Mounting hardware

Figure 1   D E

Figure 2   A B W D L
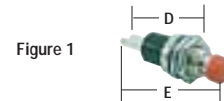
Part Number	Mfr. Cross Ref. No.	Fig.	Mounting Hole Dia.	Type ( ) Momentary	Dimensions (L" x W" x D")	Lead Spacing A"	B"	Contact Rating	Terminal Type	Button Color	Pricing 1	10	100	250	OEM 1000
26622	MS102	1	1/4"	SPST off-(on)	.65 (D) x 1.10 (E)	—	.14	3A @ 125VAC	Solder lugs	Red	$.55	$.50	$.45	$.35	$.29
26649	MS103	1	1/4"	SPST on-(off)	.65 (D) x 1.10 (E)	—	.17	3A @ 125VAC	Solder lugs	Black	.55	.55	.45	.35	.29
71642	SWB210	2	7/32"	SPST off-(on)	.33 x .36 x .20	.20	.20	1A @ 120VAC	PC right angle	Black	1.89	1.75	1.55	1.39	1.19

Tactile Switches
• Bounce time: 10 msec.   • SPST momentary ON   • Contact resistance: 100mΩ

Figure 1   D L A W B

Figure 2   L W A

Part Number	Mfr. Cross Ref. No.*	Fig.	Pins	Dimensions (in.) L	W	D	C	Lead Spacing A"	B"	Contact Rating	Lead Type	Button Color	Pricing 1	10	100	250
122972	DTS1212	1	4	.47	.47	.18	—	.20	.50	20mA @ 15VDC	PC	Black	$.29	$.25	$.22	$.18
155379	KRS-1273B	2	4	.47	.47	.14	.14	.17	.53	50mA @ 12VDC	PC	Brown	.39	.35	.31	.26

*Manufacturer cross reference number and manufacturer may vary

Full Size Toggle Switch
• Contact rating: 10A @ 125 VAC & 6A @ 250VAC
• Panel mount
• Full-size round lever   • Mounting hole diameter: 1/2"
• Medium duty   • Keyed plate indicates switch position
• Lead type: screw lugs   • Type: DPDT on-on
Includes: Mounting hardware and on/off plate

6-pin   A B C   W L D

Part No.	Mfr. Cross Ref. No	Dimensions	Lead Spacing (A/B/C)	1	10	100	250
158078	JKN3CC	1.9"L x .76"W x .73'D	.44" x .59" x .44"	$1.75	$1.59	$1.29	$.99
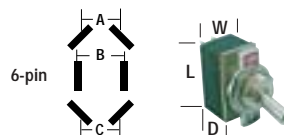
Excell Rotary DIP Switches

- Gold plated contacts to ensure reliable, low resistance connection
- Fully sealed construction
- Terminals: PC pin leads
- Life: 10,000 cycles min.
- Material: 94V-0 grade, UL approved fire retardant plastic
- Ma. switching load rating: 25mA @ 24VDC
- Op force: 500g-cm ma.

139635 **139651**

Part No.	Product No.	Position	Adjust	Code Type	W" x D" x H"	1	10	50	100
139635	ERD110RS(DRD10)	10	top	BCD	0.39 x 0.39 x 0.20	$2.49	$2.25	$2.05	$1.85
139651	ERD116RS	16	top	Hex	0.39 x 0.20 x 0.39	2.55	2.35	2.09	1.89

Magnetic Reed Switches

- NO (normally open)   • Contact form: SPST
171871: • Rating: 500mA @ 100VDC   **164081:** • Rating: 1A @ 250VAC; 1A @ 50VDC

164081

Part No.	Product No.	Size (length includes leads)	1	10	100	1000
171871	MKA141011015	1.73"L x 0.1"Dia.	$.99	$.89	$.80	$.73
164081	MRS1	2.35"L x 0.2"Dia.	.99	.85	.65	.49

SPST Round Keylock Switch

- Used in computer & other security systems
- Key removable from 2 positions
- Voltage: 125VAC   • Current: 3A
- Two keys   • Style SPST
- Terminal: barrel
- Length: .55"
- Number flat: 2
- Diameter: .21"
- Mounting hole: 0.5"

Includes: Mounting nut

Part No.	Mfr. Cross Ref. No.	1	10	50	100
106649	KS4B	$3.55	$3.25	$2.89	$2.49

DIP Switches

109057   **38818**   **38842**   **38797**

- Switch contacts: SPST
- 50VDC @ 100mA
- Standard switches have raised lever
- LP switches are flush to casing
- Switches are numbered
- Molded construction
- Pre-tinned leads

Compatible Socket Chart, see website for Sockets

Switch	Socket	Switch	Socket	Switch	Socket
109057	112192	38826	37161	38797	38607
38818	51570	38842	37372		

Part No.	Mfr. Cross Ref. No.*	Pos.	1	10	100	1000
109057	206-2	2	$.85	$.75	$.69	$.56
38818	206-4	4	.79	.65	.55	.45
38826	206-6	6	.89	.79	.69	.59
38842	206-8	8	.89	.80	.72	.64
38797	206-10	10	.99	.79	.59	.42

* Manufacturer Cross Reference number and manufacturer may vary

Rotary Switches

- Panel mount
- Make before break
- Solder lugs
- Layers: 1
- Contact rating: 30VDC @ 0.3A
- Insulation resistance: 10MΩ min.
- Contact resistance: 30mΩ
- Material: solid brass bushings, slotted aluminum shafts, plated frame, phenolic contact wafer (except for P/N 101565 – plastic casing)
- Mounting hole diameter: 3/8"
- Lug size: 0.07"   • Shaft size: 0.46" x 0.25"
101565 : Shaft size: 1.16" x 0.25"

101573

Includes: Washer and nut

Part No.	Mfr. Cross Ref. No.*	Poles	Position	Pricing 1	10	100
101531	RS0261	1	12	$1.39	$1.25	$1.12
101573	RS022	2	6	1.35	1.15	.90
101565	RS023	3	4	1.69	1.39	1.09
101557	RS024	4	3	1.09	.81	.57

* Manufacturer Cross Reference number and manufacturer may vary

More @ www.Jameco.com

See our website for more switches and a selection of Rotary Knobs. A perfect match for our Rotary Switches above.

Slotted Optical Switch

- Type N package
- Input diode: forward voltage (V_F) – 1.60V (I_F=10mA); reverse current (I_R) – 100μA (V_R = 3.0V)
- Output phototransistor: breakdown voltage ($V_{BR\ CEO}$) = 30V min.; collector-emitter dark current (I_{CEO}) – 100nA (V_{CE} = 5V)
- Coupled: saturation voltage (V_{SAT}) – 0.40V (I_F = 10mA; I_C=100μA) gap unblocked

Part No.	Product No.	1	10	50
189481	OPB660N	$2.95	$2.65	$2.39

12-Button Telephone Keypads

- White plastic
- 8-pin .100" header
- Tactile type keypad
- Contact rating: 12VDC @ 20mA
- Contact resistance: 200Ω max.
- Life test: 1,000,000 cycles per key
- Size: 2.8"L x 2.2"W x 0.6"H

153488

Part No.	Description	1	10	100
190561	Numeric keypad	$7.95	$5.96	$4.17
153488	Alpha numeric keypad	8.95	8.09	7.25

16-Button Numeric Keypad

- 4 x 4 matrix keypad
- 8-position solder pad
- Contact rating: 24VDC @ 20mA
- Contact resistance: 200Ω max.
- Life test: 1,000,000 life cycles per key
- Size: 3.0"L x 2.8"W x 0.6"H

Part No.	Description	1	10	100
169244	Numeric keypad	$7.95	$6.95	$6.25

16-Button Indoor/Outdoor Keypads

- 9-pin 0.100" headers
- Fully sealed snap-dome contact
- For indoor or outdoor use
- Contact rating: 24VDC @ 10mA resistive
- Life test: 3,000,000 cycles per key
- Compatible with MOS, TTL and DTL (10Ω max.)
- Recommended connector: P/N 103190 header and 100765 pin
- Size (housing): 4.7"W x 1.7"H x 0.4"T

152063

∗ Prepackaged: please order in increments of 10 or 100

Part No.	Description	1	10	100
152063	4x4 matrix keypad	$14.95	$13.49	$11.95
103190	Header housing (10-pin)	.42	.39	.36
100765	Header pin (10 per pack)	∗	.11	.09

Click Action Basic Precision Switches

HIGHLY ®

- 3 terminals: common; normal closed; normal open
- Dielectric strength: 1000VAC 50-60Hz for 1 min.
- Insulation resistance: 100MΩ min. (@ 500VDC)
- Type: NO-NC-common

159599   **159572**   **159581**

Part Number	Product Number	Description	Rating	Contact Resistance (initial)	Service Life Mechanically	Electrically	Terminals Type	Agency Approval	Pricing 1	10	100
159599	SS0505A	Subminiature	5A @ 125VAC	30milliΩ max.	10 million	200,000	.127" quick discon.	UL	$2.85	$2.54	$2.28
159572	VS10N051C	Micro (T90S1D12-12)	10A @ 250VAC	15milliΩ max.	10 million	100,000	.183" quick discon.	UL/CSA	2.89	2.54	2.28
159581	VS10N021C2	Micro	10A @ 250VAC	15milliΩ max.	10 million	100,000	.183" quick discon.	UL/CSA	2.45	2.25	1.99

Small High-Current PC Mount Relays

An inexpensive means of switching loads up to 30 amps. While these small, low-cost relays are designed primarily for the appliance industry and the heating, air conditioning and ventilation markets, they are also well suited for automotive load management and other applications.

- Meets UL class F insulation standard
- Electrical life expectancy is 100,000 operations at rated loads
- Mechanical life expectancy is 10 million operations
- Dielectric strength: 1,500Vrms (between contact and coil)

A   **B**   **C**

Fig. 1   **Fig. 2**   **Fig. 3**

104926: Open frame relay

Part Number	Mfr. Cross Ref. No.	Potter & Brumfield Cross Reference	Fig.	Contact Form	Coil Voltage	Coil (Ohms)	Contact Voltage	Contact Current	Pins	L x W x H (in.)	Pricing 1	10	50	100
174449	LU-5	T81H5D215	A1	SPDT	5VDC	125	120VAC/24VDC	1A/2A	6	.60 x .40 x .45	$1.95	$1.79	$1.59	$1.39
104926	733SPDT12VDC*	T90N5D12-12	B2	SPDT	12VDC	155	240VAC/28VDC	20A/10A	6	1.2 x .90 x .63	2.49	2.24	2.01	1.81
172937	JS1-12V	T72M5D121-12	C3	SPDT	12VDC	400	125VAC/24VDC	10A/5A	5	.85 x .62 x .63	1.15	1.09	.95	.79

* Manufacturer and Manaufacturer Cross Ref. number may vary

DIP Relays

- Logic control levels
- Moisture resistant
- Compatible with IC sockets
- Long life with reliable operation
- Compact design/ construction
- Excellent for PCB applications

Aromat   **FUJITSU**

106462

99901

136549
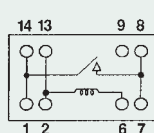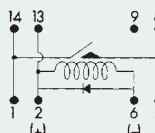
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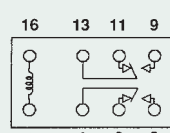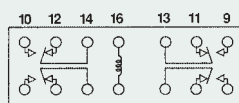
Schematic 4   **Schematic 5**

Fig. 1   **Fig. 2**   **Fig. 3**
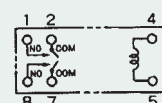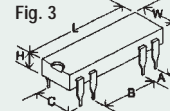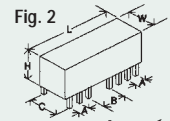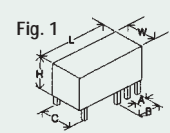
Part Number	Mfr. Cross Ref. No.	Manufacturer	Contact Schem.	Contact Form	Coil Voltage	Coil Ohms	Contact Voltage	Contact Current	Pins	Jameco Socket	Fig.	Size L x W x H (in.)	Leads A x B x C (in.)	Pricing 1	10	50	100
106462	201A05	Excel Cell Elect.	1	SPST-NO	5VDC	500	100VDC	0.5A	8	37161	3	.78 x .25 x .20	.10 x .40 x .30	$2.29	$1.95	$1.69	$1.39
138430	2D1A05	Excel Cell Elect.	2	SPST-NO	5VDC	500	100VDC	0.5A	8	37161	3	.77 x .30 x .22	.10 x .40 x .30	2.29	1.95	1.65	1.34
106471	201A12	Excel Cell Elect.	1	SPST-NO	12VDC	1000	100VDC	0.5A	8	37161	3	.78 x .25 x .20	.10 x .40 x .30	2.59	2.39	2.09	1.89
192760	5MBU-5	Fujitsu	5	DPST-NO	5VDC	35	240VAC/24VDC	5A	8	—	1	1.13 x .50 x .98	.17 x .76 x .28	1.95	1.55	1.19	.83
173913	AZ831-2C-5DSE	American Zettler	3	DPDT	5VDC	125	125VAC/100VDC	.5A/1.25A	8	37401	1	.79 x .38 x .44	.18 x .28 x .29	1.95	1.55	1.19	.82
139977	RSB5S	Shin Mei	3	DPDT	5VDC	125	120VAC/30VDC	1A/2A	8	37372	1	.79 x .39 x .37	.20 x .40 x .30	2.49	2.25	1.95	1.75
99338	LM12C00	Clare	3	DPDT	6VDC	71	125VAC/100VDC	2A	8	37372	1	.79 x .40 x .43	.20 x .40 x .30	2.75	2.49	2.25	2.05
99901	LX200D00	Clare	3	DPDT	12VDC	720	125VAC/100VDC	2A	8	37372	1	.79 x .40 x .30	.20 x .40 x .30	6.95	6.25	5.63	4.49
136549	DS4E-M-DC5V*	Aromat	4	4PDT	5VDC	62.5	125VAC/30VDC	.6A/2A	14	112299	2	1.40 x .40 x .36	.20 x .30 x .30	5.95	5.39	4.85	4.35
176313	DS4E-M-DC12V	Aromat	4	4PDT	12VDC	360	125VAC/30VDC	.6A/2A	14	112299	2	1.40 x .40 x .36	.20 x .30 x .30	7.95	7.15	6.45	5.79

* Manufacturer and Manaufacturer Cross Ref. number may vary

Potter & Brumfield Type Plastic Enclosed Construction Relay

- Dielectric strength: 500VDC (between contact and coil)
- Operating temperature: -35°C to +85°C
- Normally open (NO), normally closed (NC)
- Terminal type: quick connect
- Size: 1.1"L x 1.1"W x 1.0"H

VF4 Type Relays

Part Number	Mfr. Cross Ref. No.	P&B Cross Reference	Contact Form	Coil Voltage	Coil Ohms	Contact Voltage	Contact Current	Pins	Pricing 1	10	50	100
148582	LD12F	VF485F11	SPDT	12VDC	78	12VDC	40A	5	$ 2.49	$2.25	$1.95	$1.75

VF4 Type Socket with Coil Diode

- For use with P/N 148582 (above)
- Contact voltage/current: 12V/20A
- 12 AWG: 2 black and 1 blue wire
- 18 AWG: 1 black and 1 red wire
- 7.5" wire
- Diode coil suppression

Part Number	Mfr. Cross Ref. Number	Description	Pricing 1	10	50	100
170624	RSDO3	Relay socket with coil diode (for P/N 148582; above)	$2.35	$2.15	$1.95	$1.75

91 More @ www.Jameco.com

Our complete selection of Relays and relay Sockets is at Jameco.com.

General Purpose Relays

- DPDT • 8-pins

Pin Type Terminals – Series 78
- Contact voltage: 240VAC

Pin Type Terminals – Series 250
- Contact rating: 120/240VAC, 28VDC @ 10A
- Ambient temp. operating: -10°C to +50°C
- Size: 1.4"L x 1.4"W x 2.7"H

139740

172718

141145
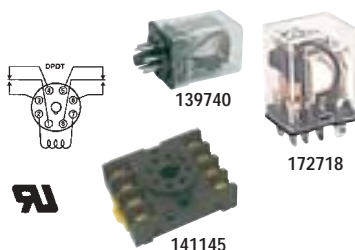
Part Number	Mfr. Cross Ref. Number	NTE Cross Reference	Coil Voltage	Pricing		
				1	10	50
Series 78						
172718	SCL12DPDT	K10UP21D1512	12VDC	$4.99	$4.49	$3.99
Series 250						
139766	BTA1-2C-12VDC	R02-11D10-12	12VDC	$8.99	$7.99	$7.19
139740	BTA1-2C-120VAC	R02-11A10-120	120VAC	8.99	7.99	7.19
Series 250 Sockets						

Part No.	Voltage	Current	Pins	Size (lbs.)	1	10	50
141145	250VAC	20 amps	8	2.0"L x 1.6"W x 0.8"H	$4.19	$3.79	$3.39
141153	250VAC	20 amps	11	2.0"L x 1.7"W x 1.2"H	4.99	4.49	3.99

Rayex General Purpose Relays

Potter and Brumfield Type LB2 Series
- DPDT • 8-pins
- Contact rating: 240VAC/30VDC @ 12A
- Mechanical life: 10,000,000 operations
- Electrical life: 100,000 operations min. at rated load

Part Number	Product Number	P & B Cross Reference	Coil Voltage	Pricing			
				1	10	50	100
172718	SCL12DPDT	K10UP21D1512	12VDC	$4.99	$4.49	$3.99	$3.59

Rayex LB2 Socket
- DIN rail snap socket for LB2 relays

Part Number	Product Number	P & B Cross Reference	Pins	Pricing		
				1	10	50
175530	PTF08AA	27E895	8	$4.95	$4.49	$4.05

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See our website for a selection of Power PCB Relays.

DC/AC Solid State Relay

- Pins: 4
- Screw terminal with hardware
- Photo isolation
- Metal mounting base
- Control voltage: 3-32VDC
- Contact style: SPST
- Contact voltage: 240VAC
- Contact current: 25A
- Terminal type: screw terminal • UL approved
- Dimensions: 2.3"L x 01.7"W x 1.1"H

Part No.	Mfr. Cross Ref. No.	1	10	50	100
162368	ESR51024-025* ...	$19.99	$17.99	16.19	$14.59

*Manufacturer may vary

DC/DC Solid State Relay

- Screw terminal with hardware
- Photo isolation
- Metal mounting base
- Control voltage: 3-32VDC
- Contact style: SPST
- Contact voltage: 60VDC
- Contact current: 4A
- Terminal type: solder lead • Pins: 4
- Dimensions: 1.5"L x 0.3"W x 0.9"H

Part No.	Mfr. Cross Ref. No.	1	10	50	100
175222	KF0604D*	$11.95	$11.25	$10.25	$9.22

*Manufacturer may vary

SHARP Solid State Relays

DC to AC
- Effective on-state current: 2A rms
- Input voltage: 1.2V @ 20mA
- Output: 265VAC @ 2.5A
- Operating frequency: 45-65Hz
- Isolation volt: 3000Vrms
- UL/CSA approved

SALE
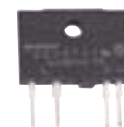
Part No.	Product No.	1	10	50	100
164996	S202TA1	$5.45	$4.95	$4.39	$3.95

Sensors

Ultrasonic Sensor Sets

- Use for motion or distance sensing
- Frequency: 40kHz ±1.0kHz
- Aluminum case

136653:
Transmit/Receive Set
- Capacitance: 2000pF ±30%
- Case size: 0.47"H x 0.62" Dia.
- Transmitter: bandwidth 4.0kHz/112dB, sound pressure level 119dB/40±1.0kHz
- Lead length/spacing: 0.39"
- Receiver: bandwidth 3.5kHz @ -71dB, min. sensitivity 65dB/40±1.0kHz (0dB vs 1V μbar) R=3.9kΩ

136653

139491:
Transmit/Receive Set
- Capacitance: 2000pF ±20%
- Lead length/spacing: 0.28"
- Transmitter: bandwidth 5.0kHz/100dB, sound pressure level 112dB/40 ±1.0kHz
- Receiver: bandwidth 5.0kHz @ -75dB, min. sensitivity 67dB/40 ±1.0kHz (0dB vs 1V μbar) R=3.9kΩ
- Case size: 0.30"H x 0.43" Dia.

139491

Part No.	Mfr. Cross Ref. No.	1	10	50
136653	40TR16F	$6.95	$6.29	$5.65
139491	40TR12B	6.95	6.29	5.65

Fujikura -1.1 to 2.5 PSI Pressure Sensor

- Measurable pressure range: -1.1 to 2.5 PSI
- Maximum load pressure: twice of rated pressure
- Volt-level output
- Operating voltage: 5V @ <10mA
- Maximum excitation voltage: 8V
- Pressure type: gauge pressure
- Pressure media: non-corrosive gas
- On-chip amplification and temp. compensations
- Pre-calibration of offset voltage and span

SALE
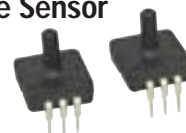
Part No.	Product No.	1	10	100
196103	XFPN-025-KPGRNW1	$21.95	$16.45	$11.55

Fujikura 0 to 5 PSI Pressure Sensor

- Maximum load pressure: 10 PSI
- Output voltage: 0 – 4.5V
- Operating voltage: 5V @ 10mA
- Pressure type: gauge pressure
- Pressure media: non-corrosive gas
- Accuracy: ±0.125 PSI at 25°C; ±0.250 PSI at -10 to 65°C
- High level output, on-chip signal conditioned, temperature compensated, and calibrated

Part No.	Product No.	1	10	100
173657	XFPN-050-KPGT1	$15.95	$14.35	$12.95

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Part Number Color Code Legend

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JAMECO

Part Number Color Code Legend
Sale **Refurbished** **Closeout**
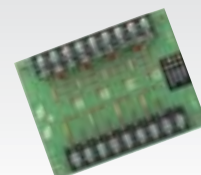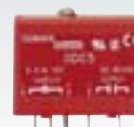
.100" IDC Socket Connectors

Double Row Polarized IDC Socket Connectors

32563

- Mates with 2 rows of .025"Sq. or Dia. posts on patterns of .100" centers (male headers, see below) • Current rating: 1A
- Industry standard IDC socket (plastic)
- Temperature rating: -55°C to +105°C
- Use P/N 73251, pg 44: insulation displacement connection crimper for these connectors

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
32491	S10	10	$.29	$.25	$.19	$.15
32563	S26	26	.45	.35	.29	.19
32643	S34	34	.49	.39	.35	.25
32678	S40	40	.55	.45	.39	.29
32707	S50	50	.65	.55	.45	.35

DINKLE
.197" (5mm) Terminal Blocks

- Materials: housing: polyimide; solder: tin plated brass
- Lead spacing: .197" • Wire range: 12-24 AWG
- Contact rating: 300V @ 10A • PC mount
- Insulation resistance: 500MΩ or more @ 500V
- Modular housing: end-to-end stackability
- Terminals interlocking with same series

DT Series

DT128 Type (Side Entry)
- Block width & height: .40" x .55"

Fig. 1 **99397**

Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
99426	1	2	0.4"	$.89	$.79	$.69	$.59
99397	1	3	0.6"	.89	.79	.69	.59

EK500 Series

160784 **161066**

Fig. 2

Fig. 3

EK500V Type (Side Entry)
- Block width & height: .40" x .55"

Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
160784	2	2	0.4"	$.75	$.65	$.50	$.43

EK500A Type (45° Entry)
- Block width & height: .48" x .61"

Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
161066	3	2	0.4"	$.75	$.65	$.49	$.39

OST
.197" (5mm) Vertical Terminal Blocks

Side Entry

- Rated voltage (UL): 250V
- Rated current: 15A
- Wire size: 14-22 AWG
- PCB hole diameter: .050"
- Spacing: .197" • Terminal block: copper zinc

189675

Part No.	Term.	Size (L"xW"xH")	1	10	100	1000
189675	2	.42 x .30 x .37	$.79	$.71	$.64	$.58
189667	3	.61 x .30 x .37	.89	.80	.72	.61

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A complete selection of Terminal Blocks can be bought on our website.

OST
.200" (5.08mm) Vertical Terminal Blocks

Side Entry

- Rated voltage (UL): 250V
- Rated current: 15A
- Wire size: 14-22 AWG
- PCB hole diameter: .050"
- Spacing: .200"
- Insulating material: polyimide
- Terminal block: copper zinc
- Wire guard: copper nickel

152346

Part No.	Term.	Size (L"xW"xH")	1	10	100	1000
152346	2	.42 x .35 x .49	$.65	$.55	$.45	$.39
152354	3	.62 x .35 x .49	.75	.67	.59	.54

KULKA® 601 GP Series Double Row Terminal Block

- Base: general purpose phenolic; 150°C
- Screws: #6-32, binder head, phillips-slot
- Terminals: brass plated • Height: .50"
- Width: 1.12" • .437" (11 mm) centers
- 1100Vrms; 20A ratings; for 14-16 AWG wires
- Open block design • UL/CSA/CE approved

Part Number	Product Number	Poles	Dimensions A"	B"	1	10	50
188701	601GP12	12	5.69	6.00	$5.49	$4.95	$3.95

.156" (3.9mm) Center Crimp Pin

- Use with .156 housings (below)
- Material: brass/tin plated
- Pin wire gauge: 22-26 AWG

✽Prepackaged: order in increments of 10, 100, 1000

Part No.	Mfr. Cross Ref. No.	1	10	100	1000
78318	AMP501T	✽	$.11	$.08	$.07

.156" (3.9mm) Center Housing Connectors

- Common to many power supplies carried by Jameco. Some power supplies (pgs 15 & 16) may require multiple connectors
- Housing material: nylon 66, UL94V-2
- Use with crimp pins, 78318, above

104731

✽Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Pins	1	10	100	1000
104715	LCH4	4	✽	$.22	$.15	$.12
104731	LCH6	6	.37	.35	.21	.17

.100" Non-Polarized Connector Housings and Crimp Pins

100802 **Single Row** **100765**

- Mates with .025" square post on pattern of .100" centers (male headers, see above)
- Current rating: 1A • Pin material: brass/tin plated
- Pin wire gauge: 22-26 AWG • Plastic
- Temperature rating: -55°C to +105°C

✽Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Cont.	1	10	100	1000
100811	SCH2	2	✽	$.27	$.21	$.17
157382	SCH3	3	✽	.27	.21	.17
100802	SCH4	4	✽	.29	.25	.19
100765	FCH1	Female pin	✽	.11	.09	.06
145357	MCH1	Male pin	✽	.14	.12	.10

.100" and 2mm Shorting Blocks

- Mates to .025" square posts on .100" centers
- Shorting socket jumper to address or code strip line plugs
- Mate with male headers (below)
- Pin material: phosphor bronze

22023 (open) **112432 (closed)**

Open: open on top to allow for a test point while
Closed: closed – functionally they are the same

✽ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	1	10	100	1000
22023	Top open, black	✽	$.12	$.09	$.06
19140	Top closed, black	✽	.12	.09	.06
112441	Top closed, blue	✽	.12	.09	.06

.100" Male Headers (Gold)

109567 **139563**

109575 **103270**

- Snap apart to fit your application
- Solder to PC boards for instant plug-in access via shorting blocks, above • Contact area: gold
- Contact material: phosphor bronze
- Current rating: 1 amp
- Temp. range: -55°C to +120°C
- Insulation material: glass filled polyester
- .025" square posts on a .100" x .100" matrix
- Use with crimp connector housing, left

✽Prepackaged: order in increments of 10, 100 or 1000

.100" Straight Male Headers
Single Row **109575**

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
108337	SMH02	2	✽	$.14	$.12	$.11
109575	SMH03	3	✽	.14	.12	.11
103341	SMH30	30	.35	.31	.28	.25
160881	SMH40	40	.45	.39	.35	.31

.100" Straight Male Headers
Double Row **67820**

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
115027	923804DS	4	✽	$.10	$.09	$.07
115035	923806DS	6	✽	.18	.16	.14
109516	923808DS	8	✽	.18	.16	.14
67820	923810DS	10	✽	.18	.16	.14
109567	923816DS	16	.35	.31	.27	.24
117196	923880DS	80	.83	.75	.67	.60

.100" Right Angle Male Headers
Single Row

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
103270	RMH36	36	$.65	$.54	$.48	$.31

.100" Right Angle Male Headers
Double Row

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
139563	923880DR	80	$1.15	$.99	$.89	$.59

.100" Low-Profile Straight Male Shrouded Headers

- Features: UL recognized, CSA certified; .025" square post mates with sockets on .100" x .100" grid
- Contact: phosphor bronze, gold plated
- Material: glass filled polyester, gray, UL94V-0
- Use with IDC socket connectors, pg 28

67811

Part No.	Description	1	10	100	1000
67811	10-pin	$.39	$.35	$.32	$.28
68371	26-pin	.54	.42	.35	.21

.100" (2.5mm) Female Header Receptacles

- Gold plated contacts
- 0.1" contact center
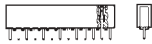
Vertical Mount (Top Entry)

Part No.	Contacts	Type	1	10	100	500
163862	34	Double row	$.99	$.87	$.76	$.61
111704	40	Double (Tin)	1.29	1.15	.99	.89

ARIES Electronics (Europe) Low Profile ZIF Sockets

Provides a low cost solution for ZIF test socket requirements. It has a height of only .319" (8.10mm), and even with the handle in open position measures just .554"(14.07mm).

102752

Dim X
.100 (2.54) Typical
Outside Test Points

- Strong rigid cast metal cam provides uniform action over entire contact area
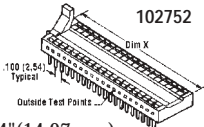
Part No.	Aries No.	Pins	Dim X	1	10	100
102744	28-526	28	1.64" ...	$5.49	$4.99	$4.49
102752	40-526	40	2.24".....	6.95	6.39	5.75

ARIES Electronics (Europe) Universal ZIF Sockets

- Solder directly to PCB or plug directly into IC socket
- Screw mounting holes for reliable operation
- Accepts .300" to .600" IC centers x .1" spacing

103991

Part No.	Aries No.	Pins	1	10	100
103991	24-6554-10	24	$7.49	$6.79	$5.99
104002	28-6554-10	28	8.49	7.79	6.99
104029	40-6554-10	40	11.95	10.59	9.95

PLCC Solder Tail Sockets

- Solder tail allows through-hole board patterns in .100" grid
- Accepts JEDEC type "A" plastic leaded chip (0.05" centers)
- Thru-hole lead length: .125"
- Body height: .375"

Part No.	Mfr. Cross Ref. No.	Pins	1	10	50	100
71618	G1P444	44 ...	$1.15	$.99	$.81	$.69

16 More @ www.Jameco.com
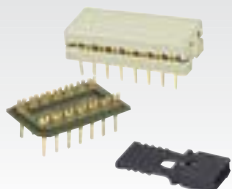
See our website for other Shorting Blocks and Plugs.

Solder Tail Low Profile Sockets

Dual Wipe

- Material: beryllium copper or phosphor bronze
- Contact current: 1A
- Tin-plated contacts and tails
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyesteror glass-filled polyphenylene sulfide • Sleeve material: brass
- Thru-hole lead lgth: .140" (A)
- Body height: .188" (B)
- Prepackaged: order in increments of 10, 100 or 1000

112221

dual wipe
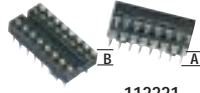
Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	10	100	1000
112205	8LPD	8	0.3	$.09	$.08	$.07
112213	14LPD	14	0.3	.10	.075	.05
112221	16LPD	16	0.3	.13	.10	.08
112248	20LPD	20	0.3	.17	.14	.11
112299	28SLPD	28	0.3	.21	.19	.17
112310	40LPD	40	0.6	.22	.19	.16

Wire Wrap Sockets

- Contact plating/leads: gold (WW) or tin (TWW); Dual Wipe
- Material: beryllium copper or phosphor bronze
- Contact current: 1A
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide
- Thru-hole lead length: .438" (L)
- Sleeve material: brass • Body height: .300" (A)
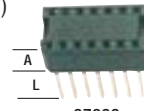
37233

Gold (WW)

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
37233	14WW2	14	0.3	$1.49	$1.35	$1.19	$1.09
37479	16WW2	16	0.3	1.75	1.59	1.43	1.29
38674	20WW2	20	0.3	2.25	1.99	1.82	1.65

Tin (TWW)

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
37217	14TWW2	14	0.3	$1.15	$1.03	$.93	$.84
37436	16TWW2	16	0.3	1.29	1.15	1.05	.95

Machine Tooled Solder Tail Low Profile Sockets

- Contact plating: gold
- Tin-plated leads
- Contact current: 3A
- Multiple contact elements
- Material: beryllium copper or phosphor bronze
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide • Sleeve material: brass
- Thru-hole lead length: .177" (A) • Body ht.: .117" (B)

65584

SALE
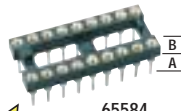
Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	1000
51625	8MLP	8	0.3 ..	$.25	$.22	$.19	$.17
37196	14MLP	14	0.3	.42	.38	.33	.30
37401	16MLP	16	0.3	.47	.43	.37	.34
65584	18MLP	18	0.3	.55	.49	.43	.39
41136	40MLP	40	0.6 ..	1.19	1.05	.79	.69

Machine Tooled Wire Wrap Sockets

- Contact plating: gold
- Tin-plated leads
- Contact current: 3A
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Material: beryllium copper or phosphor bronze
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide • Sleeve material: brass
- Thru-hole lead length: .515" (L)
- Body height: .115" (A)
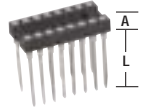
37410

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
62050	14MSWW3	14	0.3	$.93	$.80	$.67	$.60
37410	16MSWW3	16	0.3..	1.09	.93	.78	.69
38631	20MSWW3	20	0.3..	1.33	1.14	.95	.86
40336	28MSWW3	28	0.6..	1.85	1.59	1.25	1.15
94502	40MSWW3	40	0.6..	2.66	2.28	1.90	1.71

4-40 Mounting Screw Hardware for D-Subminiature Connectors

4-40 x .187" Jack Screws

∗Prepackaged: order in increments of 10, 100 or 1000

108986

.515"
L
.187"
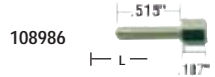
Part No.	Description	1	10	100	1000
172603	.315"L jack screw .... ∗	$.16	$.13	$.11
102816	.435"L jack screw	.49	.46	.41	.37
108986	.515"L jack screw	.54	.49	.44	.39

4-40 Screw Sets

102808 .285" .30" .385"

16547 .192"

102808: 4-40 screw (.30"L) and retainer set
16547: 4-40 x .187" jack screw (.31"L thread), washer, lock washer and nut set

∗Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	*10	100	1000
102808	Screw/retainer set	$.35	$.30	$.20
16547	Screw/nut set	.31	.24	.16

D-Subminiature Connector Hoods

15085 Plastic

25620 Metallized
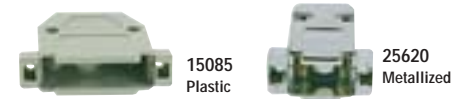
- Use with D-sub solder cup and housing style connectors

D Series: plastic hood with strain relief (gray)
MD Series: metal coated plastic hood w/ strain relief
Includes: Hardware

Part No.	Mfr. Cross Ref. No.	Conn.	1	10	100	1000
15721	DB9H	9-pin	$.49	$.45	$.39	$.35
25620	MDB9H	9-pin	.59	.49	.39	.35
147740	DB9MH	9-pin	1.45	1.29	1.15	.99
15018	DA15H	15-pin	.49	.45	.40	.35
25566	MDA15H	15-pin	.56	.44	.36	.31
15085	DB25H	25-pin	.45	.39	.35	.32
25603	MDB25H	25-pin	.59	.49	.42	.35

D-Subminiature Connectors

- Metal shells are tin-plated for improved EMI/RFI shielding
- Insulation resistance: minimum 1000MΩ at 500VDC
- Dielectric withstanding voltage: 1000V (one minute)
- Current rating: 1A to 5A
- High temperature thermoplastic
- Insulation material: PBT, UL rated 94V-0

Right Angle PC Mount Connectors
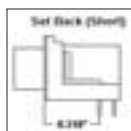
0.318" Set Back

- Short style
- Lead length: .138"
- Lead spacing: .115"
- Shell: metal
- Current rating: 1A

15149

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	1	10	100	500
104942	DB9P318	9	M	$.55	$.45	$.35	$.29
104951	DB9S318	9	F	.55	.48	.42	.36
71124	DA15P318	15	M	.69	.59	.55	.49
77956	DA15S318	15	F	.69	.59	.55	.45
15149	DB25P318	25	M	.79	.65	.55	.42
15181	DB25S318	25	F	.79	.70	.62	.43

IDC Ribbon Cable Connectors

- Current rating: 1 amp
- Temp range: -55°C to +120°C
- Insulation material: glass-filled polyester
- Contact material: phosphor bronze
- Terminates with standard D-type connectors

12431

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	Shell	1	10	100
109225	MDB9P†	9	M	metal	$1.35	$1.09	$.95
12503	CDB9P	9	M	plastic	2.49	1.79	1.59
109217	MDB9S†	9	F	metal	1.49	1.19	1.05
12520	CDB9S	9	F	plastic	2.29	2.09	1.85
115983	MDB25P	25	M	metal	1.75	1.49	1.15
12335	CDB25P	25	M	plastic	1.89	1.69	1.29
115975	MDB25S	25	F	metal	1.55	1.25	.99
12431	CDB25S	25	F	plastic	1.69	1.49	1.09

† 109225/109217: require flat cable with .0625" centers

Solder-Cup Connectors

15114 Front   15114 Back

- Compatible with 24 AWG communications and 22 AWG solid cable, pg 31

Part No.	Contacts	Gender	Shell	1	10	100	1000
15747	9	M	metal	$.56	$.44	$.36	$.24
15771	9	F	metal	.59	.49	.44	.31
15034	15	M	metal	.55	.49	.42	.29
15051	15	F	metal	.59	.49	.39	.24
15114	25	M	metal	.99	.89	.79	.71
15157	25	F	metal	.89	.80	.69	.61

Straight PC Mount Connectors

- Non-removable contacts
- 125 Vrms
- Current rating: 5 amps
- Operating temp.: -65°F to +250°F

15780   15122

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	Shell	1	10	100
111691	DB9PPCB	9	M	metal	$.55	$.45	$.32
15780	DB9SPCB	9	F	metal	.55	.45	.32
176760	DA15PPCB	15	M	metal	.49	.39	.27
176751	DA15SPCB	15	F	metal	.49	.44	.39
15122	DB25PPCB	25	M	metal	.65	.59	.42
15165	DB25SPCB	25	F	metal	.74	.55	.31

Insertion/Extraction Tool

- Exchangeable tips
- For male & female crimp pins

Part No.	Description	1	10	100	1000
19094	Insertion/extraction tool	$3.49	$2.99	$2.59	$2.59

PANAVISE IDC Bench Press and Cable Cutter

Designed for low to medium volume mass termination of various IDC connectors on flat ribbon cable.

27182

27174

Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
27174	M505	Bench press	7.0	$179.95	$159.95

M505 Accessories

Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
27182	M507	Cable cutter	0.9	$66.95	$61.95
27203	M510	Base plate	0.5	24.95	22.45

171-Pc. Solderless Terminal Kit

- Clear, hinged plastic box
- Use crimping tool P/N 72995, below

170 Terminals and Connectors!

Qty.	Description	Wire Gauge	Blade Size	Qty.	Description	Wire Gauge	Blade Size
10	Male spade	16-22	1/4"	10	Ring term.	14-16	#10
10	Male spade	14-16	1/4"	5	Ring term.	10-12	#10
10	Fem. spade	16-22	1/4"	5	Ring term.	10-12	#14
10	Fem. spade	14-16	1/4"	10	Spade term.	16-22	#6
10	Ring term.	16-22	#6	10	Spade term.	16-22	#8
10	Ring term.	16-22	#8	10	Spade term.	14-16	#10
10	Ring term.	16-14	#10	10	Butt connec.	16-22	—
15	Ring term.	14-16	#6	10	Butt connec.	14-16	—
10	Ring term.	14-16	#8	5	Butt connec.	10-12	—

Part No.	Description	1	10	25
10989	Terminal kit	$8.95	$7.95	$7.25

Discover more @ www.Jameco.com

Additional D-Subminiature Connectors on our website.

Heat Guns, Cable Ties and Accessories

Heat Gun/Stripper

Dual-Setting

- Use with heat shrink material
- Works with spot-dry paint, plaster, spackle cure adhesives
- UL listed
- Will remove adhesive-applied tiles and linoleum without chipping
- Dual heat setting: 600°F/1100°F
- Thaw pipes, frozen locks and loosen rusted bolts

Part No.	Description	1	10	25
76865	Heat gun	$39.95	$35.95	$31.95

Weller® 250-Watt, 3-Setting Industrial Heat Gun

- 750°F to 800°F hot air at nozzle; 3-position switch; hot-off-cool
- Designed for assembly and repair applications such as shrink tubing and vinyl, epoxy curing/drying/cooling
- Long-life heater and fan components
- ESD safe
- 120VAC @ 60Hz
- 3-wire grounded plug; 6' cord

Part No.	Product No.	Description	1	10
191943	6966C	Heat gun	$119.95	$107.95

PVC Heat Shrink Tubing

- 2:1 uniform shrink ratio
- Color: black
- Shrink temp: 125°C
- Sold in 10' and 100' increments
- UL/CSA approved

182748

182772

Part No.	Dia. before (mm)	10	100
184721	.12" (3)	$1.19	$10.50
182730	.16" (4)	1.39	12.50
182748	.20" (5)	1.45	13.00
182756	.24" (6)	1.49	13.50
182764	.31" (8)	1.79	16.00
182772	.43" (11)	2.49	22.50
182781	.59" (15)	3.50	30.00

Our complete selection is @ www.Jameco.com

Other Cable Tools and Accessories available online.

Nylon Cable Ties

Weather Resistant

104141

UV Resistant

- Contain Carbonate A for greater resistance to ultra violet rays in outdoor use
- Color: black
- Sold in increments of 100s or 1000s

Part No.	Tensile Strength (lbs.)	Dimensions (L" x W")		100	1000
104141	18	4.0 x 0.10		$.037	$.024
190781	40	8.0 x 0.13		.07	.06
190801	40	13.0 x 0.14		.113	.088

Cable Tie Assortments

- Tensile strength: 18-50 lbs.

145701

145701:
1000 pcs. (4"L); 10 colors

150412:
500 pcs. (4"L); 300 pcs. (8"L); 50 pcs. (11"L), 5 colors

145701 (closeup)

Part No.	Weight (lbs.)	1	10	50
145701	0.7	$9.49	$8.49	$7.39
150412	1.7	13.95	11.49	9.95

Solid Hook-Up Wire – 22 AWG

- Temperature range: -55°C to +105°C
- Passes UL VW-1 flame test
- MIL-W-16878D type B
- Weight: 100' (0.3 lbs.); 1000' (3.8 lbs.)
- For use with breadboards such as the JE20 series, pg 33

Part No.	Mfr. Cross Ref. No.	Color	100 ft.
36775	122BE/K	Blue	$29.95
36804	122BK/K	Black	29.95
36839	122G/K	Green	29.95
36863	122R/K	Red	29.95
36927	122Y/K	Yellow	29.95

Gray Flat Ribbon Cable – 28 AWG

- Single edge red stripe for pin 1 orientation
- Center spacing: 0.05"
- 28 AWG (7 x 36)
- Insulation: polyvinyl chloride (PVC)

103481

- Voltage rating: 300V
- Temperature rating: -20°C to +80°C
- Stranded copper wire
- **Prepackaged and priced in increments of 10', 25', 100' or 500'**

Part No.	Mfr. Cross Ref. No.	Cond.	10 ft.	25 ft.	100 ft.	500 ft.
135538	171-10	10	$1.49	$3.20	$11.50	$47.50
37760	171-25	25	3.90	8.75	25.00	110.00
37920	171-40	40	6.20	14.75	40.00	180.00
37954	171-50	50	6.75	14.50	49.00	210.00

Nylon Cable Tie Mount

- Screw tab & cradle mount adhesive
- 1.1" square adhesive 4-way cable tie used with 0.2"W max
- **Sold in increments of 10, 100 or 1000**

Part No.	Description	10	100	1000
71394	4-way cable tie	$.23	$.19	$.14

Multicolor Flat Ribbon Cable – 28 AWG

- Standard 10-color repeat sequence
- Center spacing: 0.05"
- Voltage rating: 300V
- Temperature rating: -20°C to +80°C

105718

- Stranded copper wire • 28 AWG (7 x 36)
- **Prepackaged and priced in increments of 10', 25', 100' or 500'**

Part No.	Mfr. Cross Ref. No.	Cond.	10 ft.	25 ft.	100 ft.	500 ft.
112547	28RC10	10	$1.95	$4.50	$17.50	$70.00
105697	28RC25	25	6.29	14.25	49.95	219.95
105726	28RC40	40	8.69	19.552	69.49	299.95

Twisted Pair Cable – 24 AWG

- PVC insulation
- Use for hook up wire
- Stranded tinned wire (7 x 32)
- 80°C • 300 V
- Reduced EMI
- Weight: 100' 0.5 lbs.

Part No.	Mfr. Cross Ref. No.	Color	100 ft.
105806	224GW/K	Green/white	$44.95

Modular Network Cable

- 100MHz • 8C • Gray
- 4 twisted pairs • UTP
- Insulation: polyethylene

118130

- Nom. OD.: 189" • Nom. impedance: 100Ω
- **Solid:** uses modular plug P/N 119343, pg 46
- **Stranded:** uses modular plug P/N 79281, pg 46
- **Prepackaged and priced in increments of 25' or 100'**

24 AWG UTP Category 5 – 100MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
118130	Stranded (gray) (7/32 AWG)	$5.95	$19.35	$164.50

24 AWG UTP Category 5 Enhanced – 350MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
176225	Solid (gray)	$5.00	$17.00	$100.00
176233	Stranded (gray)	6.00	21.00	180.00

Multiconductor Shielded Computer Communication Cable – 24 AWG

- Stranded copper wire, multi-colored insulation
- Insulated with polyvinyl chloride (PVC)
- Voltage rating: 300V
- Color: gray • Drain wire

31843

- 24 AWG (7 x 32 AWG) • Shielded 100% w/ aluminum mylar
- **Prepackaged and priced in increments of 25' or 100'**
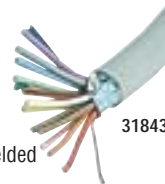
Part No.	Mfr. Cross Ref. No.	Cond.	Dia.	25 ft.	100 ft.	1000 ft.
31860	SC4	4	0.20"	$4.75	$17.00	$140.00
31878	SC9	9	0.23"	9.75	31.00	230.00
31843	SC15	15	0.28"	13.25	49.00	440.00
31851	SC25	25	0.37"	19.75	71.00	640.00

Kynar™ Wire Wrap Wire – 30 AWG

- Assorted color coded insulation
- Used for prototyping
- Color coded Kynar™ (Polyvindene Fluoride) insulation
- Silver plated copper (solid conductor)
- Temperature: -40°C to +125°C

22550

- See pg 29 for sockets
- Wire wrap tools, see website • UL 1423
- Passes UL VW-1 flame test

Part No.	Color	Wt. (lbs.)	100 ft.
22550	Blue	0.6	$29.95
22584	Black	0.6	29.95
22648	Red	0.6	29.95
22613	Green	0.6	29.95

IC Programmers and Erasers   10 more @ www.Jameco.com

One-Socket EPROM Programmer 8MB

Serial Port Interface

- ZIF socket
- Motorola s1f, s2f and s3f can convert to binary or ASCII prior to download
- Baud rate configurable
- Data bits: 8
- Start/Stop bits: 1
- Parity: none, even, odd, default none
- Flow control: none, RTS/CTS, XON/XOFF, Default RTS/CTS
- One-year warranty
- Command line interpreter enables the user to enter one or more single character commands at once
- Programs EPROMs up to 8Mbits: 2716-27080; 2804-28256; also 27CXXX and 28CXXX series
- Maximum pins: 32 • Weight: 3.0 lbs.

Part No.	Description	1	10
81699	8Mbits EPROM prog.	$209.95	$188.95

EPROM Erasers and Accessories

- Erases all EPROMs
- **66042:**
- Erases 1 chip in 7 minutes
- Conductive foam liner eliminates static build-up
- UV intensity: 6.5mW/cm²

66042

- One-year warranty
- **Requires:** Four AA batteries (not included), P/N 32627 (below)
- **15712:**
- Erases 1 chip in 15 min. or 8 chips in 21 minutes

15712

- Maintains constant exposure distance of 1"
- Conductive foam liner eliminates static build-up
- Built-in safety lock to prevent UV exposure
- Complete with holding tray for 8 chips
- UV intensity: 6.8mW/cm² • One-year warranty

Part No.	Description	1	10	25
66042	Portable eraser	$64.95	$58.95	$52.95
15712	8-chip eraser	129.95	117.95	106.95
34382	Lamp for 15712	34.95	34.95	34.95
13864	Foam (12"x24"x0.25")	7.95	6.95	5.95
32627	'AA' Ni-Cad battery	1.95	1.75	1.49

512k Two-Socket E(E)PROM Programmer

Compact unit operates stand-alone or interfaces with your computer via the printer port.

- Programs EPROMs up to 25V, Flash EPROMs (5V and 12V) EEPROMs, and SRAMs
- 2 sockets for master/slave operation
- Stand alone mode uses two optional 9V batteries (P/N 151095, pg 59) or included 12VDC @ 500mA adapter
- One-year warranty
- Weight: 2.1 lbs.
- Size: 6.4"L x 4.3"W x 2.2"H

Includes: Adapter, cable and CD-ROM

FUNCTIONS
Stand alone mode
- Functions Set - Blank check
- IC Type select - Program
- Verify and check sum
Remote control mode
- Type - Read - Program
- Verify - Disk - Help
- Process - Parameter

Part No.	Description	1	10
130155	EPROM writer	$289.95	$259.95

---

microEngineering Labs

"PICProto" Prototyping Boards

- High quality blank prototyping boards for PICmicro microcontrollers
- Holds microcontroller, 5V regulator, oscillator, capacitors and DB9-25 connector
- Double-sided board with plated-through holes

132644 176891 132636 132652
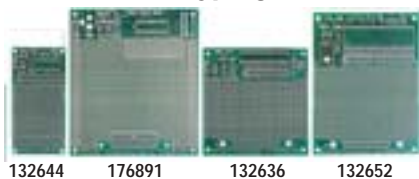
Includes: Documentation sheet with schematic, suggested parts and placement

PICProto 18, 18L: For all 18-pin PICs including PIC16C52, 54, 56, 58, 554, 558, 61, 620, 621, 622, 71, 710, 711, 712, 715, 716, 84, 16CE623, 624, 625, 16F627, 628, 83, and 84

Part No.	Description	Size (L" x W")	1	10
132644	PICProto 18	3.0 x 1.5	$9.95	$8.95
176891	PICProto 18L	3.6 x 4.1	19.95	17.95

PICProto 3: For the 28-pin PIC16C62, 63, 642, 66, 72, 76, 773, 16F73, 76, 870, 872, 873, 876, 18C242, and 252

132636	PICProto 3	3.0 x 3.0	$14.95	$13.49

PICProto 64: For the 40-pin PIC16C64, 65, 662, 67, 74, 77, 774, 16F74, 77, 871, 874, 18C422, and 452

132652	PICProto 64	4.0 x 3.0	$16.95	$14.95

microEngineering Labs

EPIC Plus PICmicro Programmer

The EPIC Plus Programmer quickly and easily programs the PIC12Cxxx, 12CExxx, 16C505, 16C55x, 6xx, 7xx, 84, 9xx, 16CE62x, 16F62X, 7x, 8x, 87x, 14C000, 17C7xx, 18Cxxx microcontrollers from Microchip. The basic programmer includes an 18-pin socket for programming 8, 14 and 18-pin PICmicro MCUs.

- Simple installation with parallel port (printer) interface
- Interactive software for Windows and DOS
- Command line operation for automated, non-interactive programming

Requires: Two 9V batteries or AC adapter (below) **Includes:** Assembler software

Part No.	Description	1	10
132679	EPIC Plus PICmicro programmer	$59.95	$53.95
162317	AC wall adapter (16VDC/500mA, details on pg 21)	7.95	6.95
67256	6' DB25 cable (details on pg 50)	6.45	5.79

microEngineering Labs

PICBasic and PICBasic Pro Compiler

Converts your BASIC programs into files that can be programmed directly into a PICmicro MCU.

- Compatible with most PICmicro MCU programmers including EPIC plus
- I2C instructions to access external serial EEPROMs
- Use in DOS or Windows (includes Windows editor/DE software)

132661: PICBasic Compiler
- Expanded BASIC Stamp I compatible instruction set
- Supports PC12C67x, PIC14Cxxx, PIC16C55x, 66x, 7xx,84, 92x, and PIC16CF8xx microcontrollers • May use up to 2k of code space

150543: PICBasic Pro Compiler
- Direct and library routine access to any pin or register
- Automation page boundary handling past 2k • Bit, byte, word arrays
- Real If…Then…Else…Endif • Hierarchical expression handling
- Built-in LCD support • MPLAB/MPASM/ICE compatibility
- Supports 12C5xx, 12C67x, 12CE67x, 14C000, 16C5x, 16C55x, 6xx, 7xx, 84, 92x, 16CE62x, 16F62x, 7x, 8x, 87x, 17Cxxx, and 18Cxxx microcontrollers

132661

Part No.	Description	1	10
132661	PICBasic compiler	$99.95	$89.95
150543	PICBasic Pro compiler	249.95	224.95

microEngineering Labs

LAB-X1 Experimenter's Module Board

A pre-assembled experimenter's platform, providing an assembled testbed containing the circuitry commonly used with PICmicro microcontrollers. Projects may be created using the LAB-X1, including calculator, voltmeter, LCD backpack, tone dialer, and RC servo controller.

- 40-pin ZIF socket for PICmicro MCU (not included, PIC16F877-20/P recommended) • Jumper selectable oscillator from 4MHz to 20MH
- Reset button • 16 switch keypad • 3 potentiometers • LED bargraph
- 2 lines x 20 characters LCD module • Speaker • 2 RC servo connectors
- RS232 interface • Socket for RS485 interface (device not included)
- Socket for real time clock/serial analog to digital converter (devices not included)
- EPIC in-circuit programming connector • Prototyping area for additional circuit
- Wiring for microchip in-circuit debug connector

Requires: AC adapter (below)

Part No.	Description	1	10
169113	LAB-X1 Experimenter Board	$199.95	$189.95
176882	PIC16F877-20/P microcontroller (pg 5)	9.49	8.49
127976	AC adapter (details on pg 21)	4.75	4.25

Circuit Boards and Accessories

Photo Etch™ Printed Circuit Kit

Generate your own 1:1 artwork. Then use the patented Fast Neg film process to make a photo negative and sensitize and expose a blank copper board. Finish by developing and etching. No camera or darkroom is required.

DATAK

Part No.	Prod. No.	Description	1	10
16731	12-750*	Printed circuit kit	$39.95	$36.95

*Shipped via UPS ground to continental U.S. only

DATAK

Dry Concentrated Etchant

Part No.	Prod. No.	Description	1	10	25
70201	ER3	One pint	$3.95	$3.49	$2.95

More @ www.Jameco.com
Miscellaneous Chemical Products on our website.

DATAK

Photo Etch Accessories

16758 16723 70261

Part No.	Prod. No.	Description	1	10
16758	ER8*	Neg. resist dev. 16 oz	$6.95	$5.95
16723	ER18	TINNIT™ 1 pint	6.95	5.95
70261	ER71*	Photo resist liquid	8.95	7.95

*Shipped via UPS ground to continental U.S. only

DATAK

Pre-Sensitized Circuit Boards & Developer

- Pre-coated circuit board
- Size: 3.0"L x 4.0"W x 1/16"T
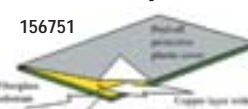
156751

Includes: Instructions

Part No.	Description	1	10	25
156751	Single sided	$4.95	$4.49	$3.95
156742	Double sided	6.49	5.85	5.25
156734*	4 oz. Pos. developer	6.95	5.95	4.95

*Shipped via UPS ground to continental U.S. only

Copper-Plated Blank Circuit Boards

Ideal for hobbyists and students doing prototypes of circuits. Copper plating on board for either single-sided or double-sided boards.

- 1.6mm thickness

Fig. 1 Fig. 2 Fig. 3

Part No.	Mfr. Cross Ref. No.	Description	Size (L" x W")	Fig.	Wt. (lbs.)	1	10	50
169279	PCBS3X6	Single side	3.0 x 6.0	3	0.1	$2.95	$2.69	$2.39
169287	PCBS6X6	Single side	6.0 x 6.0	2	0.2	4.95	4.49	3.95
169295	PCBS12X12	Single side	12.0 x 12.0	1	0.5	13.95	12.56	11.30
169308	PCBD3X6	Double side	3.0 x 6.0	3	0.1	4.95	4.45	3.95
169316	PCBD6X6	Double side	6.0 x 6.0	2	0.2	7.95	7.15	6.45
169324	PCBD12X12	Double side	12.0 x 12.0	1	0.7	17.95	15.95	14.49

Solderless Breadboards

20757   **20773**   **20790**   **20811**

20600

20669   **20722**

These long-lasting solderless breadboards feature screen-printed color coordinates suitable for many types of digital and analog prototyping and circuit design. Larger models feature a heavy-duty aluminum backing with binding posts. Use Jameco's AC/DC breadboard power supply, P/N 77681 (right).

- Accepts most electronic components, including integrated circuits and transistors for digital and/or analog circuitry   • 0.1" hole spacing
- Pins are identified by numbered rows and columns   • Ideal for high frequency and low noise circuits
- Low static, plastic body – CMOS safe   • Use to breadboard and debug circuit designs
- Nickel-plated clips designed to withstand up to 5,000 insertion cycles
- Breadboard strips connect together to form larger working areas   • One-year warranty
- Components are easily interconnected using 20-28 AWG wire (P/N 19289 & 20079, right)
- Some models feature heavy-duty aluminum backings (JE24, JE27)

Attention Educators! Buy jumper wire (right) in bulk and SAVE!   (see Hook-up Wire on pg 31)

Part Number	Product Number	Terminal Strips	Bus Strips	Contact Points	Binding Posts	Breadboard Size L x W (In.)	Baseplate Size L x W (In.)	Weight (lbs.)	1	10	50	100
20600	JE21	1	2	400	0	3.3 x 2.1	—	0.13	$4.95	$4.49	$3.95	$3.49
20669	JE22	1	0	630	0	6.5 x 1.4	—	0.20	5.49	4.95	4.49	3.95
20722	JE23	1	2	830	0	6.5 x 4.0	6.5 x 2.1	0.30	8.95	7.95	7.25	6.55
20757	JE24	2	1	1,360	2	6.5 x 3.1	8.5 x 4.0	0.60	12.95	11.95	10.95	9.95
20773	JE25	2	4	1,660	3	6.5 x 4.3	8.5 x 5.1	0.80	18.95	16.95	14.95	13.95
20790	JE26	3	5	2,390	4	6.9 x 5.8	9.1 x 6.9	1.10	23.95	21.95	19.95	17.95
20811	JE27	4	7	3,220	4	7.3 x 7.5	9.5 x 8.3	1.40	31.95	29.95	27.95	25.95

Digital Design Lab

- **Two 7-Segment Displays (digit height: 0.3")**   • One-year warranty
Solderless Breadboard
- Interconnected nickel-plated tie points, fitting all DIP sizes and all components with AWG #22-30 (0.3-0.8mm) solid leads   • 1580 tie points
DC Power Supplies
- DC supplies equipped with short circuit protection
- Variable DC power: 0 to +15V & 0 to -15V @ 0.5A
- Fixed power supply: ±5VDC @ 1.0A
Function Generator (5 ranges)
- Frequency range: 1Hz–10Hz, 10Hz–100Hz, 100Hz–1kHz, 1kHz–10kHz, 10kHz–100kHz
- Sine wave output: 0–8 Vp-p variable   • Triangle wave output: 6Vp-p fixed
- Square wave output: ±5V fixed   • DCV digital multimeter

International 115/220VAC Switchable

Our most popular digital lab!

Includes: Power cord and manual

Part No.	Description	Size (W" x D" x H")	Weight (lbs.)	1	10	25
75838	Digital lab	10.6 x 13.3 x 5.0	8.1	$279.95	$249.95	$226.95

Digital-Analog Design Lab

Solderless Breadboard
- 2712 interconnected nickel-plated tie points, fitting all DIP sizes and all components with AWG #22-30 (0.3-0.8mm) solid leads
DC Power Supplies
- Variable DC output: 0 to +15V & 0 to -15V @ 500mA; Fixed DC output: +5VDC, 1A; -5VDC, 300mA   • Input power: 120/220VAC @ 50-60Hz (switchable)
Function Generator
- Frequency ranges: 1Hz–10Hz, 10Hz–100Hz, 100Hz–1kHz, 1kHz–10kHz, 10kHz–100kHz
- Sine wave output: 0–8 Vpp variable   • Triangle wave output: 0–6 Vpp variable
- Square wave output: 0–8 Vpp variable
Other features:
- 2 variable resistors: VR1=1kΩ, VR2=100kΩ • 8 data switches   • 2.5" dia. 8Ω, 25W speaker
- 2 pulse switches (2 sets of outputs: A, A, B, B)   • 2 banana sockets, 2 BNC jacks   • One-year warranty
- Two 7-segment LED displays (digit height: 0.3")   • 8 red LEDs with separate input terminals

International 120/220VAC Switchable

Includes: Power cord and manual

Part No.	Description	Size (W" x D" x H")	Weight (lbs.)	1	10	25
136266	Digital-analog lab	12.8 x 9.8 x 3.7	8.5	$379.95	$341.99	$307.79

Wire Jumper Kit (350 pcs.)

- 25 each of lengths 0.1" through 5.0" (14 sizes)
- 350 assorted lengths in 13 colors
- Pre-stripped/preformed 22 AWG solid wire jumpers

19289

19289: 350-piece wire jumper kit
- Handy, durable, clear plastic case
20079: 350-piece refill for 19289
- Case not included

SALE

Part No.	Description	1	10	50	100
19289	Wire jumper kit	$13.95	$12.59	$11.35	$10.19
20079	Refill for 19289	9.99	8.99	7.99	7.25

Reinforced Jumper Wires

- 24 AWG-300 volts
- Reinforced pin ends for durability
- 10 pack assortment: 2 each yellow, white, red, black & blue

Part Number	Mfr. Cross Ref. No.	Length (mm / inch)	1	10	100
126341	JW100	100 / 3.94	$4.09	$3.69	$3.35

AC/DC Power Supply

Output Specifications:
+5VDC @ 1A; -5V @ 300mA fixed; 0 to +15VDC @ 500mA variable, 0 to - 15VDC @ 300mA variable; 12-6-0-6-12 tapped VAC, 300mA fixed

International 120/220VAC Switchable

With built-in short-proof regulated power supplies.

- Input power: 120/220VAC @ 50-60Hz (switchable)
- Indicator lamps and power fuses
- Just plug-in and start to use
- Compact and lightweight   • Color: beige
- For both digital and analog circuits
- Compatible with test leads P/N 77841, pg 39
- Size: 7.4"W x 5.5"D x 2.6"H
- Weight: 5.5 lbs.   • One-year warranty

Part No.	Description	1	10	25
77681	Power supply	$119.95	$109.95	$99.95

Powered Project Board

- Solderless breadboard with 2420 tie points
- DC power supplies: +5V @ 1A; variable power 0 to +15VDC and 0 to -15VDC @ 500mA
- Back panel has ground terminal
- Outputs are short-circuit protected
- Edge plate for non-DIP size components
- Input power: 120/220VAC @ 50-60Hz (switchable)
- Replacement fuse: P/N 103907, pg 23
- Power switch with light   • One-year warranty
- Breadboard size: 7.4"L x 6.8"W
- Enclosure size: 9.8"L x 8.0"W x 2.6"H   • Wt.: 6.8 lbs.

International 120/220VAC Switchable

Includes: Power cord

Part No.	Description	1	10	25
136258	Powered breadboard	$99.95	$89.95	$79.95

SMD Surfboards @ www.Jameco.com

General Purpose Prototyping Boards

Select the prototype board that fits your needs from our comprehensive product listing. Prototyping boards with punched holes are convenient, economical tools for assembling circuit components and trying cost-effective alternatives to custom designs.

- 0.062" board thickness
- 0.1" hole spacing
- 0.08" pad size
- Plated through pads are double-sided
- PCB material epoxy glass

See pg 35 for PCB mounting enclosures and hardware (recommend P/N 106551)

21434

21477

Board Outline

W
L
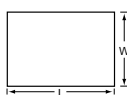
Circuit Patterns
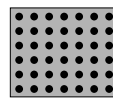
A
Holes Only
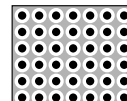
B
Pad Per Hole
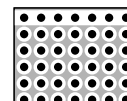
C
Power/Ground Perimeter Bus with Pad Per Hole
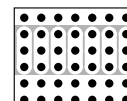
D
3 Hole Solder Pad and Bus

Part Number	Product Number	Size (W" x L")	Fits Enclosure(s) (see page 96)	Circuit Pattern	Hole Pads	# Holes x Dia. †	Power/Ground Busses	Connector I/O or Edge	# Mounting Holes x Dia.	Weight (lbs.)	Pricing 1	10	50	100
105099	2855PCB	1.60 x 2.70	18921	B	single-sided	288 x .035"	none	none	2 x .115"	.02	$4.95	$4.49	$3.95	$3.59
105101	5002PCB	1.50 x 3.50	11957	C	single-sided	365 x .038"	4	none	2 x .140"	.02	6.95	6.25	5.59	4.95
28177	PCB1	2.42 x 4.10	18913	C	plated through	674 x .040"	none	none	4 x .120"	.04	5.95	5.35	4.79	4.29
105136	2320PCB	3.30 x 4.50	11885	C	single-sided	1266 x .035"	4	none	4 x .140"	.06	9.95	8.95	7.95	6.95
105161	2852PCB	3.60 x 7.00	18905, 11973	B	single-sided	2225 x .035"	4	none	4 x .140"	.10	14.95	13.45	11.95	10.95
21434	JE401(8001)	4.50 x 6.50	18868	B/D	single-sided	2360 x .042"	2	none	none	.12	20.95	18.95	16.95	15.49
21451	JE405(8003)	4.50 x 6.50	18868	C	single-sided	2360 x .042"	1	none	none	.12	19.95	17.95	15.95	13.95
21477	JE407(8006)	5.00 x 13.25	N/A	B	plated through	6063 x .038"	none	none	8 x .120"	.28	39.95	35.95	32.49	28.95
105187	2507PCB	6.10 x 8.80	18876	C	single-sided	4771 x .035"	7	none	8 x .140"	.21	29.95	26.95	23.95	21.95
37621	169P84WE	8.50 x 17.0	N/A	A	drilled only	14448 x .042"	none	none	none	.53	23.95	22.75	21.59	20.49

† All 0.042" diameter hole boards use terminals T44, T49, and T421 (see website)

Hardware, Cabinet and Boxes

Aluminum & Brass Threaded Standoffs

Hex .187"/.250" Female

Hex .250" Male/Female

† Finish: Iridite (clear)[1] per MIL-C-5541-D; stainless steel[2]
✲ Prepackaged: order in increments of 10, 100 or 1000

.250"
Thread
.250" Hex Female

.187 Hex Male/Female
4-40 x .187" Jack Screws and Hex Nut

.187"
.187"
L

.515"
.187"
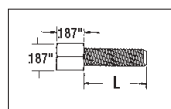
169931/172603/102816

108986

.250" Hex Female
4-40 Thread .250" Hex

Part Number	Metal †	Hex Length	Pricing 1	10	100	1000
139192	Alum[1]	.250"	✲	$.19	$.14	$.08
77500	Alum[1]	.375"	✲	.20	.15	.09
134762	Alum[1]	.437"	✲	.21	.18	.15
108370	Alum[1]	.500"	✲	.25	.17	.10
77518	Alum[1]	.625"	.45	.35	.23	.14
133604	Alum[1]	.750"	.41	.35	.21	.13
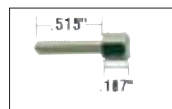
Part No.	Description (Brass[2])	1	10	100	1000
169931	.275"L jack screws	✲	$.15	$.13	$.11
172603	.315"L jack screws	✲	.16	.13	.11
102816	.435"L jack screws	.49	.46	.41	.37
108986	.515"L jack screws	.54	.49	.44	.39

Component Cabinet

85446

81701

85454

Drawer (85454) Divider (85446)

- Drawer can be divided into 4 sections (clear)
- Wall mountable cabinet (ABS black)
- Cabinet size: 6.0"D x 15"W x 7.9"H · Wt.: 4.7 lbs.
- Drawer size: 5.5"L x 2.7"W x 1.5"H
- Divider size: 2.4"L x 1.1"H

Includes: 20 clear plastic drawers, 20 dividers and 30 adhesive I.D. labels

✲ Prepackaged: order in increments of 10 or 100

Part No.	Description	1	10	50
81701	Component cabinet	$15.95	$13.95	$12.49
85454	Drawer for cabinet	.39	.35	.29
85446	Divider for drawer	✲	.19	.17

Plastic Fliptop Case for SMDs

128 Compartments for Surface Mount Components

- 8 rows x 16 columns grid
- Fliptop openings on each bin
- Color: gray
- Padded cover locks bins closed
- Perfect match to store P/N 156881 SMD resistor assortment, pg 7
- Size: 11.0"L x 8.3"W x 1.7"Thick
- Weight: 1.4 lbs.

Includes: Labels for each bin

Part No.	Description	1	10
164267	SMD fliptop case	$47.99	$43.19

Bug Boxes

- Anti-static plastic
- Fits in bug cage (P/N 11332, see web)
- **11341:** stores sixty 8-pin or thirty 16-pin DIPs
- **11375:** Designed to store all types of components
- Box size: 4.9"L x 3.3"W x 0.6"H

11375

11341

Part No.	Description	1	10	100
11341	30 compartments	$3.95	$3.49	$3.15
11375	3 compartments/6 vertical & 6 horizontal dividers............	4.49	3.95	3.49
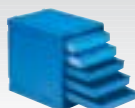
Wall Transformer Enclosures

- Enclosures include 3-prong power plug and cable strain relief
- Material: noryl
- Color: black
- Size: 3.4"H x 2.7"W x 2.3"D
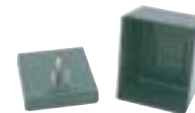
115051

Part No.	Style	1	10	100
115051	Non-vented	$2.25	$1.95	$1.69
115043	Vented	2.25	1.95	1.69

Prototype Builder Boards, Enclosures and Hardware

Call for additional OEM pricing.

The prototype builder boards on this page are specifically designed to fit into our ABS speedy boxes, die cast aluminum enclosures, aluminum boxes, metal cabinets and heavy-duty instrument cases shown in each grouping. These pre-cut boards have 2 or 4 mounting holes compatible with the PC board mounting hardware listed at the bottom, right (P/N 106551).

Board description: laminated glass epoxy 1/16" thick fire retardant per FR-4 specs. Copper-clad and solder mask one side. Drilled holes: .035" diameter on .080" square pad. Pads spaced on .10" x .10" grid.
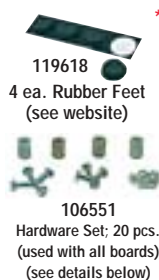
*All boards sold individually; multiple boards shown

119618
4 ea. Rubber Feet
(see website)

18921   18913   18892   11885   11922 (see website)   105110* (see website)   105161*

106551
Hardware Set; 20 pcs.
(used with all boards)
(see details below)

105099   105128   105152*   105136   105136*   105099   105152*

See page 34 and website for hardware and knobs and more printed circuit board details

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ABS Speedy Enclosures

Will not crack or split when drilled or punched. PCB mounting slots on all four sides. Lid has a lip for precision fit (adds 0.4" height). Complete with four screws and lid. All sizes below are for interior dimensions. • Color: black • ABS plastic

18913

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
18921	H2855	3.1" x 2.0" x 0.9"	0.1	$2.99	$2.69	$2.45	$2.19
18913	H2853	4.9" x 2.5" x 1.5"	0.2	3.15	2.85	2.55	2.35
18892	H2851	6.0" x 3.5" x 1.9"	0.4	3.95	3.59	3.25	2.89
18905	H2852	7.5" x 4.3" x 2.3"	0.5	5.95	5.39	4.85	4.19

Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus with pad per hole (*except P/N 105099) • Plated one side holes

105099

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105099*	2855PCB	2.7" x 1.6"	288	$4.95	$4.49	$3.95	$3.59
105128	2853PCB	4.4" x 2.0"	669	7.95	6.95	6.25	5.59
105152	2851PCB	5.5" x 3.1"	1450	9.95	8.95	7.95	6.95
105161	2852PCB	7.0" x 3.6"	2225	14.95	13.45	11.95	10.95

Die-Cast Aluminum Enclosures

High-quality die-cast aluminum cases come with channeled walls for easy PCB mounting. Ideal for RF circuits because the lid forms an effective screen against RFI interference. Made from aluminum, an excellent heat-sink, these cases are great for high temp circuits (up to 600°C). Complete with screws.
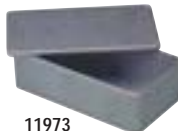
11973

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
11957	B5002	3.9" x 2.0" x 1.0"	0.2	$5.49	$4.95	$4.39	$3.99
11965	B5004	4.7" x 2.4" x 1.6"	0.4	7.95	7.15	6.44	5.79
11973	B5006	7.5" x 4.3" x 2.4"	1.2	11.99	10.79	9.75	8.75

Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus with pad per hole • Plated one side holes

105101

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105101	5002PCB	3.5" x 1.5"	365	$6.95	$6.25	$5.59	$4.95
105128	5004PCB	4.4" x 2.0"	669	7.95	6.95	6.25	5.59
105161	5006PCB	7.0" x 3.6"	2225	14.95	13.45	11.95	10.95

Aluminum Enclosures

Ideal boxes for those projects that get left lying around! Put them in an economical aluminum enclosure. The enclosure comes in two pieces which slide together.

11885

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
11869	B2300	4.0" x 2.0" x 2.8"	0.2	$4.99	$4.49	$4.05	$3.65
11885	B2320	5.0" x 4.0" x 3.0"	0.4	7.49	6.19	5.65	4.95
11893	B2335	7.0" x 6.2" x 4.6"	0.8	9.95	8.69	7.85	6.99

Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus w/ pad per hole • Ground Bus • Plated one side holes

105136

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105110	2300PCB	3.4" x 2.4"	637	$7.95	$6.95	$6.25	$5.59
105136	2320PCB	4.5" x 3.3"	1266	9.95	8.95	7.95	6.95
105179	2335PCB	6.5" x 5.0"	2829	14.95	13.49	11.95	10.95

Metal Enclosures

NEW

208901

High-quality metal enclosures are made to suit a large variety of electronics projects and applications. The base is made of aluminum. Slots are located on the sides of the cases for maximum cooling. Cases screw together and come with an attractive two-tone finish.
• Mounting screws and rubber feet included
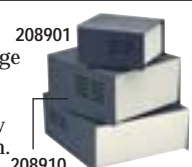
208910   208928

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
208901	B2741A	4.0" x 3.3" x 2.2"	0.4	$6.49	$5.89	$5.29	$4.69
208910	B2743A	5.9" x 5.3" x 3.0"	0.8	7.99	7.19	6.49	5.89
208928	B2744A	7.3" x 6.3" x 2.8"	1.1	8.99	7.99	7.19	6.49

Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus with pad per hole • Plated one side holes

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105110	2741PCB	3.4" x 2.4"	637	$7.95	$6.95	$6.25	$5.59
206578	2743PCB	4.7" x 4.5"	1869	6.99	6.29	5.69	5.19
105179	2744PCB	6.5" x 5.0"	2829	14.95	13.49	11.95	10.95

Heavy-Duty Instrument Cases

Both cases split apart for ease of working. Four plastic feet molded on unit. P/N 18876 includes ventilation and speaker sound slots. • Color: gray

18868

Part No.	Mfr. Cross Ref. No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
18868	H2505	7.9" x 6.3" x 2.5"	0.8	$7.39	$6.69	$5.99	$5.39
18876	H2507	10.0" x 7.5" x 3.1"	1.4	8.99	7.99	7.28	6.55

Printed Circuit Boards for Above Instrument Cases

• Power/ground, perimeter bus with pad per hole • Plated one side holes

Part No.	Product No.	Size (L x W)	Holes	1	10	50	100
105179	2505PCB	6.5" x 5.0"	2829	$14.95	$13.49	$11.95	$10.95
105187	2507PCB	8.8" x 6.1"	4771	29.95	26.95	23.95	21.95

ABS Enclosures w/ Clear Tops

Made of gray ABS plastic w/ clear polycarbonate top cover. Includes screws for mounting boards or electronic components, rubber gasket for a tight seal on your equipment & drilled holes for mounting.

141840

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
141831	203C1	4.6" x 3.2" x 1.8"	0.3	$8.95	$8.09	$7.25	$6.55
141840	203D1	6.3" x 3.2" x 1.8"	0.4	9.95	8.99	8.09	7.25
141858	203F1	7.0" x 5.5" x 2.5"	0.8	11.95	10.79	9.69	8.69

Mounting Hardware for PC Boards

• 4 spacers, 8 screws and 8 washers

Part No.	Description	1	10	50	100
106551	PC board mounting hardware	$1.79	$1.65	$1.45	$1.35

3M Adhesive Rubber Feet

Fig. 1   Fig. 2

Part No.	Product No.	Type	Fig.	Pack	(W" x H")	1	10	50
142658	SJ5012BLKC	Black cylindrical	1	100	.50 x .14	$5.95	$5.35	$4.79
142682	SJ5018BLKC	Black tapered square	2	100	.50 x .23	8.95	7.95	6.95

34 More Enclosures & Accessories @ www.Jameco.com

Part Number Color Code Legend
Sale   Refurbished   Closeout

JAMECO

Omnidirectional Electret Condenser Microphone Cartridges

Applications:
- Tape recorders, intercoms, hearing aids, telephone and answering devices, sonic controlled toys and sensors
- Modems for computers
- Used for recording, testing, and monitoring

SALE

189958/136573   **116505**   **160979**

Part No.	Type	Sensitivity	Impedance	Frequency (Hz)	Max. Op. Volt. (VDC)	Stand Op. Volt. (VDC)	Current (Max.)	Sensitivity Reduction	S/N Ratio	Terminals	Size (H x Dia.)	Pricing 1	10	100	1000
189958	WM-034B	-38 ±3dB	>2.2kΩ	20-16,000	10V	4.5V	0.8mA	-3dB @ 3V	>60dB	PC pin leads	.27" x .38"	$.75	$.59	$.45	$.32
116505	WM-54PC	-44 ±2dB	>2.2kΩ	20-16,000	10V	2.5V	0.6mA	-3dB @ 2V	>60dB	PC pin leads	.20" x .38"	.75	.67	.59	.48
160979	WM-64PKT	-44 ±3dB	>2.2kΩ	20-16,000	10V	2.0V	0.5mA	-3dB @ 1.5V	>58dB	PC pin leads	.10" x .24"	.79	.71	.64	.57
136573	WM-60PC	-54 ±2dB	>2.2kΩ	20-12,000	12V	4.5V	0.5mA	-3dB @ 3V	>40dB	PC pin leads	.30" x .38"	.53	.48	.43	.39

VHF High-Band Wireless Microphones

The perfect microphone for use with portable PA systems, video recording, and stage use. There is no cord to restrict your movements while providing clear crisp sound.

- T.H.D. (total harmonic distortion): less than 0.5% for crystal-clear sound
- Frequency stability: ±0.005% with Quartz controlled
- Maximum deviation range: ±15kHz with limiting compressor • Transmission range: 300m
- Carrier frequency range: 100Hz to 15kHz • S/N ratio: over 180dB @ 15kHz deviation

198248   **198221**

Includes: 0.25" mono jack patch cable, 9V battery and power supply

Part No.	Mfr. Cross Ref. No.	Description	Wt. (lbs.)	1	5
198248	WR101R	Handheld wireless microphone	2.1	$119.95	$107.95
198221	WR202H	Wireless microphone with clip-on headset	2.3	119.95	107.95
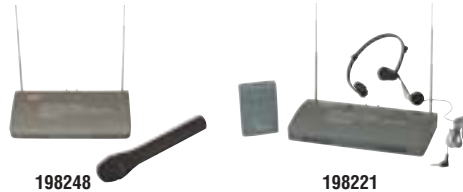
RCA Audio/Video Cables

- Video/audio applications
- See page 46 for jacks

139037   **177527**

Part No.	Description	1	10	100
139037	5" Y: 1/8" M to 2 RCA M	$1.99	$1.49	$.99
177527	6' 3 males to 3 males	4.95	4.49	3.95
29348	10' male to male (yellow)	1.69	1.49	1.25

In-Ear Stereo Headphones

SALE

- 3.5mm input jack connector
- Typical application: CD player
- Color: gray • 4' Long

Part No.	Description	1	10	100	1000
191880	Headphones	$.79	$.49	$.39	$.29

Speakers and Buzzers

Solar Products

Round Ferrite Speakers

- Pre-tinned speaker lugs
- Large magnet
- Anodized metal surfaces
- Paper diaphragm
- Braided copper voice coil leads

SALE

135589 side   **135589 back**

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input (W) Nom	Max	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	10	100
135589	FE200	2.0 x 0.7	0.2	0.4	8	83	420 – 5000	1.3 x 0.4	$1.69	$1.45	$.99
177130	57RF07	2.2 x 0.8	0.5	0.9	45	88	500 – 8000	1.6 x 0.5	.49	.43	.39

Square Ferrite Speakers

- Pre-tinned speaker lugs
- Freq. range: 300-14000Hz
- Anodized metal surfaces
- Large magnet **99995 back**
- Paper diaphragm
- Braided copper voice coil leads

99995 side
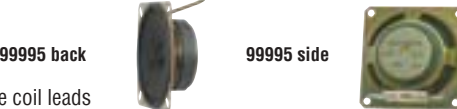
Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input (W) Nom	Max	Impedance (Ω)	Output SPL (dB)	Magnet Size (Dia." x H")	Pricing 1	10	100
99995	FEB204	2.6 x 0.9	3.0	4.0	4	95	1.8 x 0.5	$2.49	$2.25	$1.99
171168	FEB450SP	4.2 x 1.5	1.0	2.0	8	90	1.8 x 0.6	1.79	1.55	1.39

Buzzers

Fig.1   **Fig.2**   **Fig.3**   **Fig.4**

Magnetic Buzzer

Part Number	Fig.	Operating Volt. (VDC/mA)	Voltage Range (VDC)	Frequency (Hz)	Sound (dB)	Dimensions	Pricing 1	10	100	1000
207984	1	1.5/30	1.25 – 2	2300	75	.47"H x .38"Dia.	$2.49	$2.19	$1.99	$1.69
76064	1	5/30	4 – 7	2300	85	.35"H x .46"Dia.	2.99	2.69	2.45	2.19
207976	1	12/30	8 – 15	2300	85	.47"H x .38"Dia.	2.49	2.19	1.99	1.69

Piezo Buzzer

Part Number	Fig.	Operating Volt. (VDC/mA)	Voltage Range (VDC)	Frequency (Hz)	Sound (dB)	Dimensions	Pricing 1	10	100	1000
138712	1	12/7	3 – 16	4000	80	.30"H x .54"Dia.	$1.95	$1.59	$1.19	$.89
207896	2	12/120	6 – 15	2800	105	3.4"L x 2.2"W x 1.3"H	8.95	7.95	6.95	6.25
123537*	3	24/20	4 – 28	2900	80	1.4"H x 1.7"Dia.	4.19	3.79	3.39	2.95
76021	4	24/20	1.5 – 28	3200	95	1.0"H x 1.1"Dia.	4.25	3.79	3.49	3.09

* P/N 123537: dual tone

Photovoltaic Solar Panel

SALE

- Output connection: conductive film requiring pressure contact or use of 3M conductive epoxy
- Rated 9.5VDC open circuit; 9VDC @ 0.06A in direct sunlight
- Size: 6"L x 6"W x 0.1"T

Part No.	Description	1	10	50
141751	0.5W solar panel	$7.95	$5.95	$5.15

IOWA THIN FILM TECHNOLOGIES

Flexible Thin-Film Solar Panel

- For recharging NiCad, Nickel Metal Hydride and Gel-cell batteries
- Size: 4.5"L x 1.46"W

Positive (+) End   Negative (−) End

'Blast' (+) End of the Solar Panel   'Fingers'   'Open Ends lines' (−) End of the Solar Panel
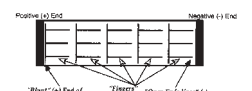
Part No.	Output	1	10	100
171061	3VDC @ 40-50mA	$9.19	$8.29	$7.49

velleman ## Solar Cells

The perfect solar cells for students and experimenters in these rugged cases.

- Connection: lead

200192: 0.5V, 400mA
200205: 0.5V, 800mA
200213: 1V, 200mA
200221: 2V, 200mA

200192

200221

Part No.	Product No.	Size (LxWxThick)	1	10
200192	SOL1	1.8" x 2.8" x 0.2"	$3.99	$3.59
200205	SOL2	2.6" x 3.7" x 0.2"	8.99	7.99
200213	SOL3	1.8" x 3.0" x 0.2"	4.99	4.49
200221	SOL4	3.0" x 3.7" x 0.2"	8.99	7.99

Fume Extractors and Filters

Absorbs noxious lead fumes using activated-carbon filter and a high-efficiency fan

- Operate continuously providing filtered air
- Air flow: 115 CFM
- Compact size allows use on work bench with minimum space
- 120VAC, 60Hz, 22 watt
- On/off power switch
- Aerodynamic hood design for effective removal of solder fumes
- Noise: 49dB fan
- Fuse protected
- Static ground jack
- Removable carbon-impregnated filter
- One-year warranty

168268:
- High carbon plastic case
- Size: 8.5"W x 5.0"D x 8.0"H • Weight: 4.2 lbs.

120150: • Black anodized aluminum case
- Size: 6.4"W x 4.6"D x 7.9"H • Weight: 4.6 lbs.

Includes: Detachable power cord

Part No.	Description	1	10	25
168268	Fume ext. (ESD safe)	$59.95	$53.95	$49.95
120150	Fume extractor	79.95	71.95	64.95
127183	Replace. filters (2/pk)........	10.95	9.95	8.95

Weller® 40-Watt Soldering Station

- Lighted on/off switch
- Adjustable power from 5 watts to 40 watts
- 40 watt,120V @ 60Hz
- Temperature is electronically controlled from 350° to 850°F
- Size: 5.5"L x 4.5"W x 3.5"H • Weight: 1.9 lbs.

Includes: ST3 1/8" screwdriver tip, soldering station and manual

Part No.	Product No.	Description	1	10
146595	WLC100	Soldering station	$49.95	$44.95

Weller® Soldering Tips

Replacement Tips for WLC100, WP25 & WP23

	146608	146616	146624
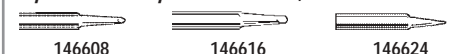
Part No.	Product No.	Description	1	10
146608	ST1	Screwdrvr tip 1/16"	$5.95	$5.35
146616	ST3	Screwdrvr tip 1/8"	5.95	5.35
192129	ST4	Scrwdrvr tip .187"	4.99	4.49
192137	ST5	Flat tip .031"	4.49	4.05
192145	ST6	Scrwdrvr tip .031"	5.25	4.75
146624	ST7	Conical tip 1/32"	5.95	4.95
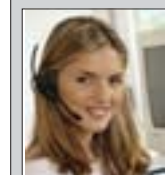
Don't worry about backorders. Over 99% of our products are in stock!

We'll Send It Today!

Just place your order by 6PM EST for same business day shipment.

50-Watt Controlled Output Soldering Station

Weller®

ESD Safe

- 50 watts of controlled power
- Temperature lockout prevents raising of temperature to high levels
- Temperature calibration allows user to reset temperature to match tip styles and sizes
- Quick heat-up and temperature recovery
- Temperature range: 350°F - 850°F (177°C - 454°C)
- Accuracy within 9°F (5°C) • Automatic shut-off
- Size: 5.9"L x 4.5"W x 3.6"H • Weight: 4.2 lbs.

Part No.	Prod. No.	Description	1	10
166879	WES50	Soldering station......	$115.95	$105.95

Weller® Soldering Tips

Replacement Tips for WES50

- Tip leakage: less than 2mV
- Tip to ground resistance: less than 2Ω
- Tips also used with WCC100 station
- Additional tips can be special ordered

16774   16782
16803   16811
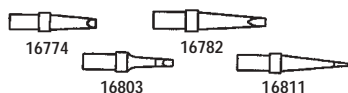
Part No.	Prod. No.	Description	1	10
16774	ETA	Screwdriver 1/16"	$6.95	$6.25
16782	ETJ	Long screwdriver 1/32"	6.95	6.25
16803	ETR	Narrow scrwdrvr 1/16"	6.95	6.25
16811	ETS	Long conical 1/64"	6.95	6.25

16 to 30-Watt Variable Soldering Iron, Stand & Sponge

116572: (JS1258)
- Length: 7.5"

36329: (100S)
- Black anodized steel base – 5.3"L x 3.3"W
- See below for replacement sponge (P/N 134631)
- Fits most soldering irons .85" diameter

Includes: Sponge (SP715)

116572   (SP715)   134631

36329

Part No.	Description	1	10	100
116572	Soldering iron	$18.95	$17.09	$15.35
36329	Soldering stand	4.25	3.85	3.45
134631	Sponge (for 100S)	2.99	2.69	2.49

Weller® Professional 25-Watt & 35-Watt Soldering Irons

- Interchangeable heater elements
- Lightweight handle with cushioned grip
- Quick change knurled collar
- Length: 9"
- 120VAC @ 60Hz

170587
192153

Includes: Power cord & ST3 tip (left)

Part No.	Product No.	Description	1	10
170587	WP25	25W solder iron	$29.99	$26.99
192102	WP35	35W solder iron	39.95	35.95
192153	PH25	Solder iron stand	15.95	14.55

SMD Tweezer Iron

- Maximum efficiency ceramic heating elements insures rapid heat-up and instant heat recovery
- Max. temp.: 760°F
- 120VAC
- Heater insulation exceeds 100MΩ
- Heater power consumption: 35W x 2

168410
168583

Includes: 0.095" tip

Part No.	Description	1	10	25
168410	Tweezer iron	$59.95	$53.95	$48.95
168583	Tip .078"	11.95	10.79	9.69
168591	Tip .590"	12.95	11.69	10.49

Electric Desolder Pump

- Easily disassembled for cleaning
- One-hand operation
- Replacement tips available
- UL listed • Size: 10.5"L x1.0"Dia.

19254

Part No.	Description	1	10
19254	Electric desolder pump	$26.95	$23.95
19262	1 tip for 19254	4.95	4.49

One-Shot Desoldering Gun

This low maintenance desoldering gun with self-contained vacuum pump is perfect for desoldering through-hole components.

- Power consumption: 60W
- Interchangeable standard tips
- Zero static tip, 3 wire grounded
- Sensitive where CMOS protection is needed
- Quick release stainless solder collector
- Electronic temperature control
- Ergonomic, lightweight design
- 120VAC • One-year warranty
- Gun casing size: 7.0"L x 4.0"W • Weight: 2.2 lbs.

Includes: 1.0mm tip

Part No.	Description	1	10	25
129066	Desolder gun	$99.95	$89.95	$79.95
140214	"Y" replacement tip	10.95	9.95	8.95
134594	1.0mm replace. tip	8.95	7.95	7.19
134607	1.2mm replace. tip	8.95	7.95	7.19

PanaVise Electronic Work Center

- Circuit board holder, standard base, tray base mount, solder station, sponges and wire holder included
- Size: 8.5"W x 7.8"H
- Weight: 5.3 lbs.
- One-year warranty

Part No.	Description	1	5	10
27060	Electronic center	$74.95	$71.25	$66.95

Discover what you are looking for @ www.Jameco.com

More Soldering Stations and tips on our website.

✖ XYTRONIC   Analog Display Soldering Stations

Maintains a steady temperature using a cartridge heating element, providing a longer life for the solid soldering tip.

SMD Tip Below

114569

- Electronic temperature control: 300°F to 850°F
- CMOS devices protected against voltage spikes
- Power consumption: 60W
- Weight: 4.1 lbs.
- Size: 4.3"W x 6.0"D x 3.4"H

183177

Includes: One 1/16" tip

Part No.	Product No.	Description	1	10	25
114569	168-3C	Analog display station	$94.95	$84.95	$76.95
183177	XY9-60A	Analog display station	99.95	89.95	79.95
134640	SP815	Replacement sponge for P/N 114569	2.99	2.69	2.49
134631	SP715	Replacement sponge for P/N 183177	2.99	2.69	2.49

✖ XYTRONIC   Desoldering & Soldering/Desoldering Stations

- Simple fine tune feature to select 300–850°F range
- Vacuum pump activated "on demand" using finger tip switch on desolder handle
- CMOS devices protected against voltage spikes
- Replacement sponge for P/N 125516 – see above (P/N 134631)
- One-year warranty

125508

125516

125508: Size: 9.2"L x 7.2"W x 3.6"H; Weight: 13.1 lbs.
Includes: 3/64" conical tip and solder holder

125516: Size: 11"L x 10"W x 4.0"H; Weight: 18.1 lbs.
Includes: 1/32" conical tip, solder holder, tip cleaner and tweezers

Special 5% Bundle Bonus
Complete digital solution for an ISO 9000 Soldering/Desoldering Station –
P/N 125508 & 162456
Sold separately $439.90
Combined: P/N 207263
$407.95

Part No.	Product No.	Description	1	10	25
125508	968	Desoldering station	$309.95	$278.95	$251.95
125516	988	Soldering/desoldering station	409.95	368.95	331.95
207271	TWZ60ESD	SMD tweezer iron w/ .078" tip	69.95	62.95	56.95
207221	D1A60A	Replacement desoldering iron	74.95	67.49	59.95
168583	46-060102	Tip .078" for P/N 207271	11.95	10.79	9.69
168591	46-060115	Tip .590" for P/N 207271	12.95	11.69	10.49

Temperature Controlled 45-Watt Soldering Station

Grounded Soldering Tip

- 500°F to 850°F   • Fully grounded
- Insulated ceramic heating element for rapid heat-up and heat recovery   • Wt.: 2.5 lbs.
- Heater insulation exceeds 100MΩ
- Zero voltage circuitry eliminating high voltage spike and magnetic field generation   • Size: 7.0"L x 4.5"W x 3.5"H

Includes: Manual and 1.2mm diameter conical tip

156785

Part No.	Product No.	Description	1	10	25
156785	379	Soldering station	$69.95	$62.95	$56.95
156814	44-510601	Sharp conical 1/32" tip	4.95	4.49	3.95
156822	44-510604	Chisel conical 1/16" tip	4.95	4.49	3.95
134631	SP715	Replacement sponge for P/N 156785	2.99	2.69	2.49

✖ XYTRONIC   Digital Display Soldering Station

ESD Safe!

Designed for soldering situations where precise temperature is required for sensitive components.

- Temperature is maintained at ±6°F
- Electronic temperature control from 392° to 878°F
- External calibration port
- CMOS devices protected against voltage spikes
- Power consumption: 60 watts
- Power-on and Heater-on LED indicators
- Size: 5.1"W x 8.0"D x 4.0"H   • Weight: 4.8 lbs.

162456

Includes: One 1/16" tip

168401

Part No.	Product No.	Description	1	10	25
162456	XY9-60D	Soldering station with ESD	$129.95	$116.95	$104.95
168401	TWZ50ESD	SMD tweezer iron w/ 0.078" tip	79.95	71.95	64.95
168583	46-060102	Tip .078" for P/N 168401	11.95	10.79	9.69
168591	46-060115	Tip .590" for P/N 168401	12.95	11.69	10.49
134631	SP715	Replacement sponge for P/N 162456	2.99	2.69	2.49

More @ www.Jameco.com

See our website for additional Soldering, Desoldering Tools & Accessories.

Rosin Core Solder Rolls

32117   141778

Part No.	Mfr.	% Composition			Dia. (In.)	Wt. (lbs.)	Pricing			
		Tin	Lead	Silver			1	10	50	100
32117	Kester	60	40	0	.031	1.00	$13.19	$11.89	$10.69	$9.59
141778	Super	60	40	0	.031	2.20	13.95	12.95	11.95	10.95

300-Watt Solder Pot

Temperature Regulated between 420 – 450°C

- HI/LO switch selectable for temperature
- 2 conductor power cord; 5' 9" long
- Holds up to one 1.1 lbs. solder bar
- Input voltage: 110VAC @ 2.7A; 50-60Hz
- Size: (unit) 4.8"H x 5.5" Dia. (base)
- Size: (tub) 2.4"Dia. x 1.6"D

Part No.	Description	1	10	25
160303	300W solder pot	$64.95	$58.49	$52.65

600-Watt Solder Pot

Temperature Adjustable

- Tin boiler temp.: 0°C to 500°C
- Input voltage: 110VAC @ 5.5A
- Holds up to three 1.8 lbs. solder bars
- Size (unit): 3.9"L x 1.6"D; (tub): 6.8"L x 5.5"W x 2.8"H

Includes: Skimmer and removable dross tray

Part No.	Description	1	10
172275	600W solder pot	$189.95	$159.95

Soldering Tip Cleaner with Stand and Rosin Paste Flux

156777:
- For cleaning soldering iron tips without the use of water and sponge
- Metal wool for cleaning
- Rubberized base for stability

156777

73584:
Highly active non-corrosive and non-conductive flux with excellent wetting action

73584

Part No.	Description	1	10	50
156777	Tip cleaner & stand............	$4.95	$4.49	$4.05
160004	Metal wool replacement	2.79	2.49	2.29
73584	Rosin paste flux (2 oz.)	1.59	1.45	1.29
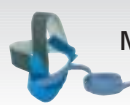
More Anti-Static Products @ www.Jameco.com

Protective Coiled Grounding Wrist Strap

- Comfortable, adjustable Velcro wrist strap
- The coiled cord has banana plug and alligator clips
- Extended cord: 9' long
- Color: black

Includes: 1MΩ resistor for added safety

Part No.	Description	1	10	100
34551	Anti-static strap	$6.95	$6.25	$5.59

Anti-Static Work Mats

Make your work environment safe from static discharge! These mats are made of attractive semi-conductive vinyl that provide adequate discharging, yet will not short leads or pins.

- Color: gray

Includes: Grounding clip

Part No.	Dimensions	Wt. (lbs.)	1	10	100
168508	24" x 28"	1.8	$17.95	$16.19	$14.55

Pomona® Stackable Banana Test Lead Cables

159898 **159901** **159919**

- 5000V @ 15A • 55°C max.
159898: Two 36" leads, mini clip w/ banana
- 45VAC @ 5A max.; beryllium copper contact and glass filled insulation
159901: Two 24" leads **159919:** Two 36" leads

Part No.	Prod. No.	Description	1	10	25
159898	3782-36	Mini w/ banana.....	$7.95	$6.95	$6.25
159901	B-24-02	Patch cord	9.95	8.95	7.95
159919	B-36-02	Patch cord	9.95	8.95	7.95

Banana to Banana Test Leads

- Stackable
- Color coded; 2 each red, yellow, blue, black, white • 9.8" long
- 10 per package
- 18 AWG wire

Part No.	Description	1	10	25
77841	Test leads	$22.95	$20.69	$18.59

BNC to Alligator Clip Test Cable

Permits BNC assembly to be used as a test cable.

- Upper connection: two alligator clips – red 5.5" 22AWG wire; black 9" 22AWG wire
- Lower connection: 23" RG/58U cable with BNC connector

Part No.	Description	1	10	100	1000
11383	BNC cable	$3.49	$2.49	$2.25	$2.05

1⁹⁄₁₆" Banana Plugs

- Set-screw connection
- Standard banana spring plug
- Additional 6-32 threaded hole for connection reliability
- .1875" lead opening
- Insulating sleeve is threaded to banana plug body
- Size: 1.6"L x 0.4"Dia.

Includes: One red and one black plug

Part No.	Description	1	10	100	1000
72194	Banana plugs	$1.59	$1.49	$1.25	$1.09

Double Banana Plugs

- Dual gold-plated female banana plugs
- Stackable

125217

Part No.	Description	1	10	100
125209	Blk banana connector.......	$2.39	$2.15	$1.89
125217	Red banana connector	2.39	2.15	1.95

Mini Test Clips

- Two lengths
- One black and one red hooked probe clip

Part No.	Description	1	10	100
114809	1.75" mini test clips	$1.89	$1.49	$1.35

Mini-Clip Test Leads

These spring loaded mini-clips hook easily to IC pins for testing.

- Set of five: red, blue, green, black and yellow
- 14"L; clips on both ends
- 26 AWG to 300V CSA/UL approved wire

Part No.	Description	1	10	100	1000
135298	Mini test leads ...	$11.49	$10.39	$9.29	$8.39

BNC to Clip Test Cable

BNC connectors are designed for signal frequencies into the gigahertz range, making them ideal for communications, video and test equipment.

- Mini-clip • Length: 39"

Part No.	Description	1	10	50	100
11463	Mini-clip RG174	$4.39	$3.99	$3.59	$3.19

Handheld Oscilloscope and Multimeter

Six Units in One!

- 4,000 count True RMS DMM
- 1MHz bandwidth oscilloscope
- 20MHz sampling rate
- Logic test • Frequency counter
- Trend mode allows recording of sine waves for a period of time
- Component test
- Three-year warranty

Tpi

Includes:
AC charger, test leads and manual

Part No.	Description	1	5
160805	440 digital oscilloscope	$349.95	$339.95
168330	RS-232 software and cable	69.95	62.95

Digital Handheld Oscilloscope

- 5MHz for repetitive signals; 0.5MHz for single shot events
- Input impedance: 1MΩ/20pF
- Maximum input voltage: 100V peak (AC + DC)
- Input coupling: DC, AC, and GND (GND for auto zero reference)
- LCD graphics display: 64 x 128 pixels (64 x 96 pixels for signal)
- High contrast LCD display with 3.3" viewing angle
- Vertical resolution: 8-bit (6-bit for LCD)
- Timebase range: 2µs to 20s/div
- Input sensitivity: 5mV to 20V/div • Screen hold
- Trigger mode: run, normal, once, and ± slope
- True RMS and dB measurements • Linearity: ±1 bit
- Recommend 9VDC @ 300mA power supply (P/N 133891, pg 21) • Batteries not included, recommend P/N 32627 or P/N 151087, see website

velleman

Includes: Insulated BNC to alligator clip measurement probes and case

Part No.	Description	1	5
168823	5MHz scope (Model HPS5).......	$199.95	$179.95

PC-MultiScope 100MHz Dual-Channel DSO

Turn your PC into a digital storage oscilloscope for 1/2 the cost of a DSO!
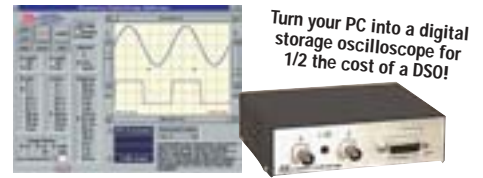
mission technology

- 100MHz sampling; dual channel
- Chart recorder and FFT mode
- 5mV to 5V per div.; 20MHz bandwidth; ext. trigger
- 0-4MHz sine and square wave signal generator
- Triple power supply; 5VDC @ 500mA and ±0-8VDC @ 250mA
- One-year warranty

Includes: Parallel port cable, AC adapter, alligator clip probe, Windows® 3.1/95/98 software

Part No.	Description	1	10
163230	PC-MultiScope 3	$579.95	$529.95

60MHz Modular Oscilloscope Probe

- Hook and pointed probe
- Alligator clip ground wire
- Max: 600VDC • BNC male connector • 5' cable

Attenuation	x1	x10
Bandwidth (1dB)	3MHz	40MHz
Bandwidth (3dB)	6MHz	60MHz
Impedance (R/C)*	1MΩ /180pF	10MΩ /22pF

* With oscilloscope input 30pF

Part No.	Mfr. Cross Ref. No.	1	10	50
22891	LF101E	$22.95	$20.79	$18.69

100MHz Modular Oscilloscope Probe

- Hook and pointed probe
- Alligator clip ground wire
- Max: 600VDC
- BNC male connector
- 5' cable

Attenuation	x1	x10
Bandwidth (1dB)	3MHz	60MHz
Bandwidth (3dB)	6MHz	100MHz
Impedance (R/C)*	1MΩ /150pF	10MΩ /14pF

* With oscilloscope input 20pF

Part No.	Mfr. Cross Ref. No.	1	10	50
66149	LF210A	$31.95	$27.99	$24.99

250MHz Oscilloscope Probe

- Hook and pointed probe
- Alligator clip ground wire
- Max: 600VDC
- BNC male connector
- 5' cable

Includes: Extra probes

Attenuation	x1	x10
Bandwidth (1dB)	3MHz	150MHz
Bandwidth (3dB)	6MHz	250MHz
Impedance (R/C)*	1MΩ /150pF	10MΩ /14pF

* With oscilloscope input 20pF

Part No.	Mfr. Cross Ref. No.	1	10	25
140687	LF290	$45.95	$41.39	$37.25

EZ DIGITAL
20MHz Dual-Trace Oscilloscope

Blue CRT for higher resolution!

- 6" rectangular high-resolution blue CRT with internal graticule & scale
- Vertical deflection: 5mV/div to 5V/div in 10 calibrated steps
- Horizontal deflection: 0.2µs/div to 0.2s/div in 19 calibrated steps, 1-2-5 sequence
- Max. signal input voltage: 250V (DC and peak AC)
- ADD function measures sum of two signals
- Input voltage: 98-125VAC @ 1A, 198-225VAC @ 0.5A, 50-60Hz, 45W

Includes: Two 40MHz probes (X1 & X10), power cord, manual, and block diagram

Part No.	Product No.	Description	1	10
136098	OS5020	20MHz scope........	$419.95	$377.99

EZ DIGITAL
20MHz Dual-Trace Oscilloscope with 1MHz Function Generator

- Basic specs same as OS5020 (below)
- **Function generator**
- Frequency range: 0.1Hz to 1MHz (7 ranges)
- Output waveform: sine, triangle, square, TTL pulse
- Output impedance: 50Ω
- Output voltage: 14Vp-p
- Input voltage: AC100/120/220/240V 50-60Hz

2 Instruments in 1

Part No.	Product No.	Description	1	10
94650	OS5020G	Func. gen.	$529.95	$499.95

Handheld 20MHz Digital Oscilloscope & Multimeter

- 4-in-1 test equipment: digital oscilloscope, DMM, frequency counter and logic analyzer
- **Oscilloscope**: 2-channel input, 5mV-2V/div; DC-20MHz(-3dB); 50ns - 0.5us/div; 20 MS/s sampling rate
- **Logic analyzer:** 8 inputs; 1.4V threshold level; 35VDC max. input; 50ns min. pulse width
- **Digital multimeter:** 3999 counts; 40 segment analog bargraph; AC/DC voltage from 400mV-600V; AC current from 40µA-400mA; DC current from 400µA-400mA; resistance from 400Ω-40MΩ; continuity & diode testing
- **Frequency counter:** 5Hz-20MHz; 5 digit max.; AC/DC/DC input coupling; 35Vrms/42V-P/60VDC max. input
- Probes use P/N 22891/66149/140687, pg 39

METEX
162430

(Shown w/ logic probe P/N 162974 – not included)

Includes: Manual, 5VDC @ 3A power supply, power cord, DMM test leads, holster and case

Part No.	Description	1	5
162430	20MHz digital scope	$799.95	$749.95
162974	Logic probe	59.95	53.95
163141	Rechargeable batt. (portable use) ..	45.95	41.49
162966	RS-232 cable and software	26.95	24.25

100MHz Dual-Trace Oscilloscope

- DC to 100MHz, 2-channel dual trace
- Signal delay with delay line
- Auto focusing according to the change of intensity

EZ DIGITAL

Part No.	Product No.	Description	1	5
121179	OS5100	Oscilloscope	$1,095.95	$986.39

2-Channel, 1.5GHz Frequency Counter

- Frequency, period, totalize, RPM
- Gate time: 0.01s, 0.1s, 1s, 10s
- 9-digit green LED display
- Input power: AC 110V/220V ±10%, 50-60Hz

EZ DIGITAL

Includes: Fuse, manual and BNC cable

Channel	Frequency Range	Resolution
A	0.1Hz-150MHz	0.1nHz-10kHz
B	50MHz-1.5GHz	0.1Hz-100kHz

Part No.	Product No.		1	5
55790	FC7150	....	$299.95	$259.95

FLUKE 123 20MHz Industrial Scopemeter® with FlukeView Software

Digital Scope, 15-Function Digital Multimeter & Recorder

- **Scope:** dual-input 20MHz oscilloscope with 1.25GS/sec. repetitive sampling rate
- **Multimeter:** dual-input 5000-count True RMS meter with ohms, capacitance & temperature
- **Recorder:** dual-channel TrendPlot™

FlukeView Software (Version 3.04)

- Transfer screens, waveforms & data to your PC for printing or importing to other programs
- Store and retrieve waveforms and create library
- Gather data and enable cursor measurement, recording of up to four user-selected measurements and upload waveforms
- Compatible with Windows® operation system

Part No.	Model No.	Price
203131	Fluke 123/003SR	$1,195.95

METEX® 4-in-1 Universal System

With Function Generator, Universal Counter, DC Power Supply & Digital Multimeter

- Generate 7 forms of waves in 7 frequency ranges from 0.2Hz to 2MHz
- Measure frequency ranges from 5Hz to 1.3GHz
- Generate 5V @ 2A, 15V @ 1A fixed and 0 to 30V @ 0 to 2A variable
- Ranges: DC voltage (400mV to 100V), AC voltage (400mV to 750V), DC/AC current (40mA to 20A), resistance (400Ω to 40MΩ), capacitance (4nF to 400µF) and forward resistance of a semiconductor junction in kΩ
- Size: 14.5"W x 14.0"D x 7.0"H • Weight: 37 lbs.

Save bench space & $800!

Includes: Manual, cables and software

Part No.	Product No.		1	5
160864	MS9150	....	$549.95	$499.95

2MHz Function Generator and 2.7GHz Frequency Counter

Function Generator: (2Hz - 2MHz)

- Wave forms: sine, square, triangle, skewed, ramp, pulse & TTL level square
- Frequency: 2Hz to 2MHz in 7 ranges
- Output impedance: 50Ω ±10%
- Output amplitude: 2 to 20Vpp at open load; 1 to 10Vpp at 50Ω load
- Offset variable range (max.): ±10VDC at open load
- Frequency sweep time: 20ms to 2s

METEX®

Frequency Counter: (5Hz - 2.7GHz)

- Measuring range: channel A: 1Hz to 20MHz; channel B: 20MHz to 2.7GHz
- Input sensitivity: channel A: 20mVRMS sinewave or 100mVp-p; channel B: 40mVRMS for 20MHz to 1.3GHz; 70mVRMS for 1.3GHz to 2.7GHz
- Max. input voltage: channel A: 35Vp-p; channel B: 3Vp-p
- Input impedance: channel A, 1MΩ; channel B, 50Ω

Includes: Coax & power cable, manual and software

Part No.	Description	1	5
192671	Function generator/counter	$325.95	$293.39

17MHz Logic Probe

- Max input frequency: 17MHz
- Minimum pulse width: 30ns
- Input impedance: 1MΩ
- Pulse flash time: 500ms
- Audible tones for high and low
- Power supply protection: ±20V
- TTL threshold: (Lo) 0.8V ±0.2V, (Hi) 2.3V ±0.2V
- CMOS threshold: (Lo) 30% VCC, (Hi) 70% VCC

Part No.	Description	1	10	25
149930	Logic probe	$32.95	$29.95	$26.95

BK PRECISION 150kHz Sine/Square-Wave Audio Generator

Small and convenient, this audio generator can be used to test telco and audio equipment.

- 20Hz to 150kHz in 46 steps
- Low distortion R-C oscillator
- Variable output control
- Size: 5.9"L x 3.2"W x 0.8"H
- Output Impedance: 600Ω

Includes: 9VDC battery

Part No.	Product No.	Description	1	10
166334	BK3001	Audio generator........	$78.95	$71.95

2MHz Function Generator

- Frequency range: 0.02Hz to 2MHz
- Waveforms: sine, triangle, square, ramp, TTL pulse, skewed sine
- Variable waveform/duty cycle symmetry
- DC offset voltage from 0 to ±10V; can be superimposed to output waveform
- Output voltage: 20Vp-p (open circuit), 10Vp-p (into 50Ω)
- Input voltage: 110V/220V 50-60Hz

EZ DIGITAL

Includes: Power cord, BNC to clip cable, fuse and manual

Part No.	Product No.		1	5	10
66069	FG8002	....	$189.95	$179.95	$169.95

250-Watt Analog Power Supply

50VDC @ 5A
- Adjustable voltage/current outputs
- Constant voltage and current operation
- Color-coded adjustment knobs for voltage, current, and fine tuning
- Color-coded terminals for ground, positive, negative
- 5A @ 250V fuse • Isolated ground
- Input voltage: 110VAC @ 50-60Hz
- Color: dark gray
- Size: 4.9"L x 7.7"W x 6.7"H • Weight: 13.8 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
175249	DPS5050	$179.95	$159.95	$151.95

225-Watt Analog Power Supply

15VDC @ 15A
- Output voltage: 9VDC to 15VDC
- Output current: 25A max. (22A continuous @ 13.8VDC)
- Constant voltage
- Over-voltage protection @ 16.5V
- Short-circuit protection @ 27.5A
- Color-coded adjustment knob and output terminals for voltage output • Built-in fan
- Cigarette lighter plug for current output
- Power and fan LED indicator • Weight: 3.8 lbs.
- Voltage and current panel meter
- Input voltage: 110VAC/220VAC @ 47-63Hz (switchable) • Size: 5.6"L x 6.2"W x 4.0"H

Part No.	Mfr. Cross Ref. No.	1	10	25
175257	SPS250A	$169.95	$152.95	$144.95

Logic Pulser

- Compatible with TTL, DTL and CMOS ICs
- 1MΩ sync input impedance
- "One shot" or continous 5Hz train pulse
- Pulse repetition rate: 0.5pps/400pps
- Pulse width output at 100mA load: 10µs
- Pulse mode output current: 10mA
- Square wave current output: 5mA
- Size: 7.8"L x 1.0"W x 0.6"H

Part No.	Description	1	10	25
24601	Logic pulser	$19.95	$17.95	$15.95

190-Watt Triple Output Power Supply

Digital Display
- **Output voltage:** 0 to +30VDC @ 3A 0 to -30VDC @ 3A +5VDC @ 2A
- Ripple voltage: less than 3mVp-p
- Volt and current meter: LED display (±1% + 1 digit) • Overload protection circuit
- Input volt.: 100VAC-230VAC @ 50-60Hz (switchable)

Includes: Manual and spare fuse

Part No.	Product No.	1	5
157518	GP4303TP	$549.95	$529.95

150-Watt Analog Power Supply

50VDC @ 3A
- Adjustable voltage/current outputs
- Constant voltage & current operation
- Color-coded terminals for ground, positive and negative terminals
- 3A @ 115V fuse
- Color-coded adjustment knobs for voltage, current and fine adjustment
- Input voltage: 110VAC @ 60Hz
- Size: 9.0"L x 4.75"W x 7.5"H • Weight: 12.3 lbs.

Part No.	Description	1	10	25
163723	50VDC @ 3A	$159.95	$144.95	$137.95

150-Watt Linear Power Supply

15VDC @ 10A
- Output voltage: 2VDC to 15VDC
- Output current: 15A max.
- Constant voltage and current operation
- Color-coded terminals for positive and negative terminals, voltage adjustment knob
- Overvoltage, overcurrent, short-circuit protection
- Cigarette lighter output current plug
- LED indicator for power and warning
- Current and voltage panel meter
- Built-in fan • Input voltage: 110VAC @ 60Hz
- Size: 5.7"L x 6.2"W x 4.0"H • Weight: 12.0 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
175265	DPS150A	$149.95	$134.95	$129.95

150-Watt Digital Power Supply

30VDC @ 5A
- Adjustable voltage/current outputs
- Constant voltage and current operation
- LCD displays for both current and voltage
- Coarse and fine adjustment knobs for current and voltage
- Color-coded terminals for positive, negative and ground connections
- 2A @ 250V fuse • Dual digital display
- Input voltage: 110/220VAC @ 50-60Hz (switchable)

Part No.	Description	1	10	25
153242	30VDC @ 5A	$249.95	$224.95	$213.95

100-Watt Digital DC Power Supply

30VDC @ 3A
- Triple output with fixed 5VDC @ 0.5A, 12VDC @ 0.5A
- Adjustable 0 – 30V voltage and 0 – 3A current outputs
- Displays of both voltage and current
- Constant voltage or current
- Current limiting indicator
- Overload and short circuit protection
- Binding post terminals for variable supply
- Input voltage: 110/220VAC @ 50-60Hz (switchable)
- Size: 9.5"L x 6.0"W x 5.6"H • Weight: 10 lbs.

EXTECH INSTRUMENTS

Part No.	Description	1	10
197991	Digital DC	$198.95	$178.95

90-Watt Analog DC Power Supply

30VDC @ 3A
- Constant current and constant voltage operation
- Can be used for positive or negative source
- Overload protection circuit
- Input voltage: 100-240VAC @ 50-60Hz
- Size: 5.2"W x 5.6"H x 10.0"D
- Weight: 10.9 lbs.

Part No.	Product No.	Description	1	10
101928	GP4303A	Analog DC	$199.95	$179.95

DMMs

Fluke 87 Series IV 50,000-Count Analog/Digital Multimeter

- 50,000 count digital and 51 segment bar graph display
- AC/DC true RMS
- Backlight with 2 brightness levels
- Resolution: 1µV maximum
- **DC voltage ranges:** 50mV – 1000V
- **DC current ranges:** 500µA – 10A
- **AC voltage ranges:** 50mV – 1000V
- **AC current ranges:** 500µA – 10A
- **Resistance ranges:** 500Ω – 30MΩ
- Also conductance, capacitance, frequency and temperature
- Size: 3.9"W x 2.0"D x 8.0"H

Part No.	Model No.	1	5
195670	Fluke 87 series IV	$299.95	$269.95

Fluke 175/179 6000-Count Digital Multimeters

- Min./max./average functions
- Auto hold and manual hold
- IEC 1010 rating Cat IV 600V/ Cat III 1000V
- Resolution: 100µV maximum
- **DC/AC voltage ranges:** 600mV – 1000V
- **DC/AC current ranges:** 60mA – 10A
- **Resistance ranges:** 600Ω – 50MΩ
- Also capacitance and frequency
- Size: 6.3"L x 3.3"W x 9.2"H
- Weight: 1.5 lbs.

True RMS

185535

185535 (Fluke 179): • Temperature: -40 to +400°C

Part No.	Model No.	DC Accuracy	1	5
192655	Fluke 175	0.15%	$168.95	$159.95
185535	Fluke 179	0.09%	213.95	203.95

Part Number Color Code Legend: Sale Refurbished Closeout

Digital Multimeter Quick Selection Guide

All have VDC, VAC, Resistance and Current   * See indicated page for more details on each product

Handheld Digital Multimeters

Manufacturer No. / Part No.	Best Sellers		Display Count	* Page	Analog Bargraph	RS-232 PC Interface	Autorange	True RMS	Capacitance	Inductance	Frequency	Temperature	Diode Test	Logic Test	Continuity Test	Transistor h_FE Test	Price
27115	✔	Metex M3800	Right	2000													$39.95
119212	✔	JE110	Below	2000									✔			✔	19.95
192647	✔	Wavetek 10XL	Below	2000									✔		✔		44.95
177480	✔	AEEC2890	Below	2000							✔		✔	✔	✔		49.95
155483		Metex ME-21	Right	2000	✔	✔							✔		✔	✔	59.95
147096		BelMerit DX460L	Below	2000						✔	✔	✔	✔	✔	✔	✔	99.95
155475		Metex ME-22	Below	2000	✔	✔					✔	✔	✔	✔	✔	✔	79.95
155491		Metex ME-22T	Below	2000	✔	✔		✔			✔	✔	✔	✔	✔	✔	89.95
137461	✔	Metex M3860D	Below	4000	✔	✔	✔	✔	✔	✔	✔	✔	✔		✔	✔	149.95
192655		Fluke 175	41	6000	✔		✔	✔	✔		✔		✔		✔		168.95
185535	✔	Fluke 179	41	6000	✔		✔	✔	✔		✔	✔	✔		✔		213.95
136590	✔	Mastech MY65	Right	20,000					✔				✔		✔	✔	69.95
195670	✔	Fluke 87-IV	41	50,000	✔		✔	✔	✔		✔	✔					299.95
185201		B&K BK5380	43	50,000	✔		✔	✔	✔		✔		✔		✔		149.95
182043		Fluke 189	Below	50,000	✔		✔	✔	✔		✔	✔	✔		✔		398.95

Bench-Type Digital Multimeters

132564		DM441	43	20,000				✔			✔		✔			✔	229.95
166852		Metex MXD4660A	43	20,000	✔	✔		✔			✔		✔	✔	✔	✔	249.95

Fluke 189 50,000-Count Multimeter w/ Data Logging

- Digital and analog bar graph display
- Backlight with 2 brightness levels
- Fast auto range • AC/DC true RMS
- Resolution: 1µV maximum
- **DC/AC voltage ranges:** 50mV – 1000V
- **DC/AC current ranges:** 500µA – 10A
- Also capacitance, frequency and temperature
- Conductance, diode testing and continuity function capable
- Data logging: 288 intervals stored; 100 readings • Weight: 2.0 lbs.
- Size: 8.0"L x 3.9"W x 2.0" Thick

Part No.	Model No.	Resistance Ranges	1	5
182043	Fluke 189	500Ω-30MΩ	$398.95	$378.95

2000-Count Pocket Multimeter

- **DC voltage ranges:** 200mV, 2V, 20V, 200V, 1000V
- **AC voltage ranges:** 200V, 750V
- **DC current ranges:** 200µA, 2mA, 20mA, 200mA, 10A
- **Resistance ranges:** 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ
- Diode and continuity test
- 0.5" digit height
- Removable test leads • Size: 2.6"W x 1.0"D x 4.8"H

Includes: 9V battery

Part No.	Description	1	10	50
119212	Pocket multimeter	$19.95	$17.95	$16.19

7-Function Multimeter

2000-Count

- 7 function/22 ranges & 6 range volt tester
- Large 17mm (.67") display
- **DC voltage ranges:** 200mV – 1000V
- **DC current ranges:** 200µA – 10A
- Safety tester: 6, 12, 24, 50, 110 and 220 volts
- Unique voltage Safety Tester™
- Resolution: 0.1mV maximum
- **AC voltage ranges:** 200V – 750V
- **Resistance ranges:** 200Ω – 20MΩ
- Diode test and continuity beeper

SALE

Part No.	Model No.		1	10	25
192647	10XL		$44.95	$40.49	$36.45

2000-Count Multimeter

With Temperature & Frequency Measurement

- 3½-digit LCD (1.0" digit height)
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 700V
- **DC/AC current ranges:** 200µA – 10A
- **Resistance ranges:** 200Ω – 200MΩ
- **Capacitance ranges:** 2nF – 20µF
- **Frequency:** 20kHz • Wt.: 1.6 lbs.
- **Temperature range:** -20°C – 1000°C
- Diode, transistor and continuity testing
- Data hold switch • Size: 4.0"W x 2.0"D x 8.0"H

Incudes: Manual, probes, and 9V battery

Part No.	Mfr. Cross Ref. No.		1	10
177480	AEEC2890		$49.95	$44.95

Bel**MERIT** 2000-Count Multimeter

- **DC voltage ranges:** 200mV-1000V
- Function and range annunciators
- **DC/AC current ranges:** 200µA-10A
- Diode and continuity test
- **Frequency ranges:** 2kHz-20MHz
- Z_{IN} = 10MΩ
- **AC voltage ranges:** 200mV-750V
- Data hold
- **Resistance ranges:** 200Ω-20MΩ
- Inductance: 20mH-20H • Auto power off
- Capacitance: 2nF-2000µF
- Size: 4.0"W x 1.5"D x 8.0"H

Includes: Manual, test probes and 9V battery

Part No.	Description		1	10
147096	2000-count multimeter		$99.95	$89.95

Our Lowest Priced 20,000-Count Multimeter

- Extra-large digits (0.8" digit height)
- Resolution: 10µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 2V - 700V
- **DC/AC current ranges:** 2mA – 10mA
- **Resistance ranges:** 200Ω – 200MΩ
- **Capacitance ranges:** 200pF – 20µF
- Measures transistor h_{FE} & continuity
- Hold button • Auto power off

Includes: Boot, 9V battery, probes and manual

Part No.	Product No.	1	10	25
136590	MY65	$69.95	$62.95	$56.95

METEX® 2000-Count Multimeter

0.5" Digit Height • LCD Readout

- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 100V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 20µA – 20A
- **Resistance ranges:** 200Ω – 20MΩ
- Auto zeroing
- Input impedance: 10MΩ
- Overload protection:1000VDC/750VAC

Includes: Probes, carrying case, manual & 9V battery

Part No.	Product No.	1	10	50
27115	M3800	$39.95	$35.95	$32.49

2000-Count Multimeters with RS-232, Analog Bar & Temperature

- 3½-digit LCD (.65" digit height) with analog bar
- Data hold
- True RMS (P/N155491 only)
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 2000MΩ
- **Frequency ranges:** 2kHz – 20MHz
- Diode, transistor h_{FE} logic test and continuity test

155475/155491 Temperature:
   -40°C to +1200°C @ 1°C resolution

Includes: Manual, probes, K-type thermocouple (except P/N 155483), 9V battery, software and DB9M/F cable

Part No.	Product. No.	1	10	25
155483	ME-21	$59.95	$53.95	$44.95
155475	ME-22 (temp)	79.95	69.95	62.95
155491	ME-22T (temp & RMS)	89.95	79.95	71.95

4000-Count Multimeter with RS-232, Dual Display & Inductance

- Dual displays for comparative measurements
- 3¾-digit LCD (⅝" digit height)
- **True RMS**
- Resolution: 100µV maximum
- **DC voltage ranges:** 400mV - 1000V
- **AC voltage ranges:** 400mV – 750V
- **DC/AC current ranges:** 400µA – 20A
- **Resistance ranges:** 400Ω – 40MΩ
- **Temp.:** -40°C to +1200°C; 1°C res.
- Measures inductance, capacitance, transistor h_{FE} and frequency
- Autoranging all measurement settings

Includes: 9V battery, software and cable

Part No.	Product No.	1	10
137461	M3860D	$149.95	$134.99

50,000-Count Digital Multimeter with Analog Bar Graph

- True RMS reading
- Auto and manual ranging
- 0.55" digit height
- AC/DC voltage protection
- Continuity and diode testing
- CE safety approved
- Basic DC accuracy:
  BK5360 – 0.1%;
  BK5380 – 0.025%
- **DC voltage:** 500mV to 1000V
  (10uV to 100mV resolution)
- **Resistance:**
  500Ω – 50MΩ (10mΩ – 1kΩ res.)
- **Capacitance:** 50nF – 50mF (10pF – 10µF res.)
- **Frequency:** 0.6Hz – 500kHz

Includes: Probes and manual

Part No.	Product No.	1	10	25
185201	BK5380	$149.95	$129.95	$119.95

20,000-Count Benchtop Digital Multimeter

- 4½-digit display, 5-digit green LCD
- DC accuracy: 0.05%
- Full overload protection
- Resolution: 100µV max.
- **DC voltage ranges:**
  200mV - 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 10A
- **Resistance ranges:** 200Ω – 20MΩ
- **Frequency** measurement up to 200kHz
- Continuity check w/ beeper
- True RMS in AC range
- Data hold, diode check, transistor h_{FE} measurement

Part No.	Product No.	1	10	25
132564	DM441	$229.95	$214.95	$199.95

20,000-Count Benchtop Multimeter w/ RS-232, Analog Bar & 4 Displays

- Automatic polarity indicator
- 1-2 readings per second
- DC accuracy: 0.1% +5 digits
- 10 reading storage & compare
- Resolution: 10µV maximum
- **DC voltage ranges:**
  200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 20MΩ
- **Frequency ranges:** 20kHz – 20MHz
- MIN., MAX., AVE., relative functions
- Logic, diode, transistor h_{FE} and continuity test

Includes: Manual, power cable, probes and software

Part No.	Product No.	1	10
166852	MXD4660A	$249.95	$224.95

Passive Component LCR Meter

- Measures L, C, and R with secondary parameter Q, D or R; both are displayed
- Accuracy of 0.7% for L & C, 0.5% for R
- **Inductance ranges:**
  2000.0uH to 2000.0H
- **Capacitance ranges:**
  2000.0pF to 2000.0uF
- **Resistance ranges:**
  20.000Ω to 20.000MΩ
- Test frequencies of 120Hz and 1kHz
- Dissipation Factor (D) (with C) reading: 0 to 0.9999
- Quality (Q) reading: 0 to 9999
- Selectable parallel or series equivalent circuit
- Set HI/LO limits, absolute or percentage
- Bidirectional RS-232 port with optional software
- Max./Min./Avg. recording with auto power off

Includes: Leads, alligator clips, 9V battery & holster

Part No.	Description	1	10
198678	LCR Meter	$178.95	$160.95

2000-Count Digital LCR Meter

- **Inductance ranges:** 200µH to 200H
- **Capacitance ranges:**
  200pf to 2000µf
- **Resistance ranges:** 2mΩ to 20MΩ
- Dissipation factor measurement
- Size: 6.7"L x 3.3"W x 1.4"D
- One-year warranty

Includes: Test leads and 9V battery

Part No.	Description	1	10	25
127538	LCR meter	$139.95	$125.95	$118.95

Digital Light Meter

- Lux and footcandle
- Range: 0 - 50,000 Lux 0 - 5,000 Fc
- Analog output connections
- Separate light sensor for optimum location sampling
- Dimensions (sensor probe): 3.2"L x 2.2"W x 0.5"H

Part No.	Description	1	10
131764	Digital light meter	$99.95	$89.95

Mini DC/AC Current Clamp Meter/Multimeter

- Bright 1/2" LCD display with DATA HOLD
- 0.5" digit height
- Size: 7.1"L x 1.9"W x 1.4"H

Requires:
9V battery not included (P/N 151095, pg 59)

Includes: Test leads, manual and case

ACA*	20A, 200A	±1.2% + 5d
DCA	200A	±1.2% + 5d
ACV*	500V	±1.0% + 2d
DCV	200V	±0.8% + 1d
Resistance	200Ω	±1.2% + 1d
*Freq.Response	40-400Hz	
Zero Adjust	External knob for DCA	

Part No.	Description	1	10
115756	Mini DC/AC clamp meter	$119.95	$107.95

Tools

6-Step Drill Tool

3/16" to 1/2"

Drill multiple holes in thin material with the same bit, faster and easier. You can drill holes in most materials such as plastic, metal, and wood up to 1/8" thick. No center punching on most sizes. Made of high-speed steel.

Part No.	Description	Size	1	10	25
172401	Step drill	3/16" to 1/2" ..	$9.95	$8.95	$7.95

Mini-Drill and Stand

This Mini Drill is excellent for drilling through circuit boards and protoboards. The drill comes with an array of drilling, grinding and sanding attachments. Drill stand is designed to function like a drill press.

Shown w/ drill (26702) & stand (26711)

Part No.	Description	Wt. (lbs.)	1	10	25
26702	MS398 drill	0.8	$29.95	$26.95	$23.95
26711	MS399 stand	1.8	19.95	17.95	15.95
159054	6-pc engraving bits set		7.95	6.99	6.35

9-Piece Assorted Drill Bit Kit

- Variety of sizes: .014" to .126"
- Each kit will vary in contents of bit sizes
- Shank diameter: .125"

Includes: Plastic case

Part No.	Description	1	10	50
131676	9-piece drill bit kit	$9.95	$8.95	$7.95

PC Board Drill Bits

- Reconditioned carbon steel bits
- High quality long lasting cutting edge
- Shank diameter: .125"
- Use for drilling holes in glass PC boards

Part No.	Drill Dia.	No.	Application	1	10	100
16619	.021"	75	Miscellaneous	$1.69	$1.49	$1.35
16580	.040"	59	Plated thru holes.....	1.95	1.49	.99

30-Day Money Back Guarantee
If you're not satisfied, we'll take it back!
Details on page 64.

D-Sub Pin Insertion/ Extraction Tool

- Insertion/extraction tool: red/white plastic body; exchangeable tips

Part No.	Description	1	10	100
19094	Tool	$3.49	$2.99	$2.59

5.3" Half-Round Long Nose Pliers

- Stainless steel
- Spring return
- Durable rubber handles
- 5.3" length with 1.4" plier nose
- Knurl jaws

Part No.	Description	1	10	50	100
35490	Half round	$4.95	$4.49	$3.95	$3.49
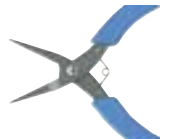
Xcelite Pliers

- Spring return
- Micro series wire cutter – flush; 6"

Part No.	Product No.	1	10	50	100
146712	170M	$5.95	$5.35	$4.79	$4.29

5" Wire Cutter/Stripper

- Insulated handles
- Spring return
- Tempered steel cutting edge
- Adjustment for wire gauges
- Size: 5.0"L x 3.0"W
- For 10-30 AWG wire • One-year warranty

Part No.	Mfr. Cross Ref. No.	1	10	50	100
78991	HT108	$3.95	$3.49	$2.95	$2.59

Automatic Wire Strippers

- Strips 8-22 AWG wires
- Spring load grip
- Size: 7.0"L x 2.5"W
- Weight: 0.8 lbs.

Includes: Wire stopper for desired strip length

Part No.	Description	1	10	25
175097	Auto wire stripper	$14.95	$13.49	$11.95

6" Premium T6 Wire Stripper

- Contoured cushion-grip handles
- Wire size markings, in AWG and mm
- 16-26 AWG stranded
- Size: 6.0"L x 2.0"W

Part No.	Product No.	Description	1	10
161234	ID45-216	T-6 16-26 AWG	$15.95	$14.49

Nibbling Tool

- Perfect for cutting, trimming, or notching sheet metal up to 18 AWG
- Time-saver when working on prototyping, chassis, and circuit boards
- Minimum .375" hole required • Size: 7.8"L

18809

Part No.	Prod. No.	Description	1	10	25
18809	HT204	Nibbling tool	$8.95	$7.95	$6.95
29330	HT204B	Replacement bit	4.95	4.49	3.95

Impact Punch-Down Tool

- Reversible clip-in blade
- Adjustable (HI-LO) spring-loaded impact mechanism
- Storage bin on handle for spare blade

175071

175089

175071:
Punch-down tool with blade
- For 66-type terminals • Size: 5.2"L x 1.5"W x 1.0"H

175089: Punch-down blade
- Blade for 110-type terminals

Part No.	Description	1	10
175071	Tool w/ 66 blade	$39.95	$35.95
175089	Punch-down blade 110	14.95	13.49

IDC Connector Crimping Tool

- Crimping distance: 27.5mm to 6mm (with attachment)
- Cushioned red handles
- Crimp insulation displacement connectors
- Use for IDC socket connectors, pg 28
- Size: 9.2"L x 3.0"W

Part No.	Product No.	1	10	25
73251	HT214	$12.95	$11.49	$9.95

Non-Insulated Terminal D-Sub Crimping Tool

14-26 AWG

- Metal crimping tool with cutter and insulated handles
- For computer pins, sockets and D-sub 26-28 AWG wire
- For butt-insulated connectors, 22-26 AWG wire • Coiled spring return
- For telephone spade lugs, 22-26 AWG wire
- For non-insulated connectors, 20-22 AWG wire
- For non-insulated connectors, 14-18 AWG wire

Part No.	Product No.	1	10	25	100
99442	HT202A	$8.95	$7.95	$6.95	$6.29

D-Sub Crimping Tool

20-28 AWG

- Crimps D-sub pins and sockets
- Size: 7.0"L x 4.0"W
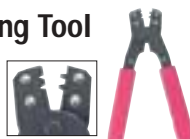
Part No.	Product No.	1	10	25
159265	HT213	$9.95	$8.95	$7.95

Ratcheted BNC Crimping Tool

- Crimps RG58, RG59, RG62, RG174 and fiber optic
- All steel construction
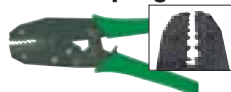
Part No.	Product No.	1	10	25
114534	HT-3019	$22.95	$19.95	$17.95

Photon Micro-Light Keychain

- Shines astonish-ingly bright
- Lights any path
- Micro size (same weight as a quarter)
- Visible for more than a mile

Includes: Lithium battery

Part No.	Description	1	10
163256	White Micro-Light® keychain	$17.95	$15.95

Terminal Wire Crimping Tool

- Crimps solderless terminals: 18-22 AWG red, 14-16 AWG blue and 10-12 AWG yellow
- Size: 9.0"L x 2.0"W

Part No.	Mfr. Cross Ref. No.	1	10	25
72995	HT303	$17.95	$15.95	$13.95

3X Magnifying Lamps

- 45" extension arm
- .49" Diameter lens
- Supplied with 22-watt Circuline tube
- Extra strong, all-metal mounting base w/ electrical outlet
- New wire clip design permits easy installation
- Metal bulb holder for extra protection
- Power requirement: 110VAC/60Hz

Part No.	Description	1	10	25
100829	Black lamp	$62.95	$56.95	$49.95
149981	White lamp	60.95	55.95	49.95

Standard Adjustable 3X Magnifying Lamp

- 4" Diameter lens
- Maneuverable 30" arm extension
- Lamp tilts or turns in any direction
- Uses 60W incandescent bulb (not included)
- Power requirement: 110VAC/60Hz

Part No.	Description	1	10	25
22710	Magnifying lamp	$29.95	$26.95	$23.95

Precision 5X Magnifying Lamp

With an arm that extends to 40" long, adjustable to any direction or angle, and 5X magnifying glass with built-in light, this is the perfect tool to help identify small electronic components and for soldering electronic components.

- 5" diameter lens • Weight: 7.1 lbs.
- Power requirement: 110VAC/60Hz

Includes: 22W circuline fluorescent bulb

Part No.	Description	1	10	25
197456	Magnifying lamp	$107.95	$97.19	$87.45

55-Piece Tech Tool Kit

Perfect for general & precision work

Kit includes:
Screwdriver handle, 6-pc. mini-hammer set, 5-pc. of double edge blade, 3-pc. soldering aid kit, 3-prong holder, 7-way crimping tool, 6 precision screwdrivers, 7-pc. hex key wrench, 30W soldering iron, adjustable wrench, anti-static strap, 8" linemans pliers, bent needle nose pliers, brush, desoldering pump, diagonal cutting pliers, flat nose pliers, utility knife, IC extractor, mini flashlight, 5 needle files, needle nose pliers, rosin core solder, 2-pc. screwdriver set and 2 tweezers
- Carrying case has outer velcro pockets to store paperwork, etc.
- Size: 17.6"L x 12.8"W x 4.0"H • Weight: 9.2 lbs.

Part No.	Description	1	5
136311	55-piece tool kit	$129.95	$116.95

66-Piece Tech Tool Kit

Kit for Field Technicians and Engineers!

Kit includes:
Mini vacuum cleaner; cassette head cleaning fluid; keyboard/monitor spray cleaner; long nose pliers w/ cutter; hobby vice; 3-pc. soldering aid kit, 3-prong holder, 5-way crimping tool, 6 long precision screwdrivers, 10-pc. (SAE) mini wrench set; 30W soldering iron; adjustable wrench, anti-static strap, 8" linemans pliers, brush, desoldering pump, diagonal cutting pliers, digital multimeter, electrical test screwdriver, electricians tape, heat sink, flat nose pliers, utility knife, IC extractor, mini drill, mini flashlight, 5 needle files, needle nose pliers, rosin core solder, 13-pc. screwdriver set, soldering stand, stainless steel scissors, tweezer, utility components box and carrying case
- Size: 18.0"L x 14.0"W x 6.0"H • Weight: 15.5 lbs.

Part No.	Description	1	5
105646	66-piece tool kit	$185.95	$169.95

RG Type Bulk Coaxial Cable

RG58/U & RG58A/U (50Ω):
   Nominal capacitance: 27pF/ft.; center resist.: 10.4Ω/1kft. @ 77°F
RG59/U (75Ω): Nominal capacitance: 19pF/ft.; center resist.: 16.5Ω/kft. @ 77°F
RG174/U (50Ω): Nominal capacitance: 30.8pF/ft.; center resist.: 97Ω/kft. @ 77°F

• **Prepackaged and priced in increments of 100' or 1000'**

Part Number	Mfr. Cross Ref. No.	Description	100 ft.	1000 ft.
116898	RG58A/U	For ethernet, oscilloscopes (stranded 20AWG)	$16.00	$140.00
112037	RG174/U	For ethernet, oscilloscopes (stranded 26AWG)	18.00	160.00

BNC/RCA Adapters

• Convert existing cabling systems to more readily available parts for expansion, replacement or upgrade

114788   114753   114770

Part No.	Description	1	10	100	500
114788	RCA female to BNC male adapter	$1.35	$1.05	$.99	$.98
114753	RCA male to BNC female adapter	1.59	1.45	1.29	1.19
114770	BNC female to "F" connector male adapter	1.79	1.59	1.39	1.19

RCA Jacks

112475   159484   172339

• Standard RCA jacks for audio and video signals
• See page 36 for RCA cables

Part No.	W x D x H (ins.)	1	10	100	1000
112475	.42 x .57 x .48	$.39	$.35	$.31	$.19
159484	.84 x .38 Black	.49	.44	.39	.24
172339	.84 x .38 Red	.49	.39	.31	.23

SMA Connectors

153365   145381   153285   160021   188509   188525

• Application: cellular phone, data communication, instrumentation and video
• 50Ω impedance   • Plating: gold and nickel
• Frequency range: 0-18GHz   • Temperature range: -65°C to 165°C
153365: Cable type: RG-174   **153285:** Cable type: RG-58/174

Part No.	Description	Plated	1	10	50	100
153365	SMA 50Ω crimp type male plug connector	Gold	$3.99	$3.59	$3.15	$2.85
145381	SMA straight female PCB mount connector, 4 legs	Gold	5.25	4.75	4.25	3.49
153285	SMA bulkhead solder female w/ washer, rear mount	Gold	2.99	2.69	2.45	2.19
160012	Panel mount feed thru connector female – female	Nickel	3.99	3.59	3.19	2.99
188509	SMA PCB straight jack	Gold	3.69	3.35	2.99	2.69
188525	SMA PCB right angle jack	Gold	5.95	4.95	3.79	3.19

BNC Coax Connectors

BNC connectors are miniature, lightweight units designed to operate up to 11GHz and typically yield low reflection up to 4GHz

Figure 1   Figure 2   Figure 3
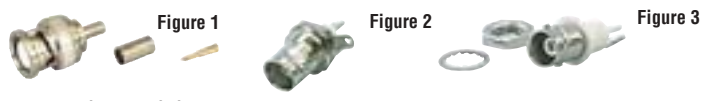
Part No.	Fig.	Description	1	10	100	500
71482	1	BNC male with pin and ferrule (RG-58)	$1.39	$1.25	$1.09	$.95
112109	1	BNC male with pin and ferrule (RG-174)	1.39	1.25	1.09	.79
71589	2	BNC female panel mount (UG-1094A)	1.39	1.25	1.15	1.05
111561	3	BNC female isolated bulkhead	2.29	1.99	1.79	1.59

0.2"-Pitch Power Connectors and Pins

Connector & Housing Specifications:
• Voltage rating: 250VAC (Mate-N-Lock 600VAC)
• Operating temperature: -55°C to +105°C
Crimp Pin Specifications:
• Material: tin plated brass • Current rating: 1.5 amps
• Wire size range: 18-24 AWG
• Use crimp tool P/N 99442, pg 44

For 5.25" Disk Drives and Power Supplies

42075 & 42067 Connector Housings:
• Keyed mating connectors
• External key bar indicates pin 1

**42729
(Male for 42075)   109145   117567**

**42649
(Female for 42067)   42075 (Male)   42067 (Female)**

• See website for extraction tools, P/N 131887 & 131879

✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	1	10	100	1000
109145	4-pin M vert. PCB mtg	✳	$.59	$.49	$.31
117567	4-pin M PCB mounting, horizontal edge mount	✳	.63	.55	.49
42075	4-pin M housing	✳	.12	.11	.10
42067	4-pin F housing	✳	.23	.18	.15
42729	M crimp pin for 42075	✳	.10	.07	.06
42649	F crimp pin for 42067	✳	.10	.07	.06

20 More @ www.Jameco.com

See our website for more BNC and SMA Adapters.

0.098"-Pitch AT Power Connectors for Motherboards & Power Supplies

• Voltage rating: 250V AC/DC   • Current rating: 7A AC/DC   • Temperature range: -25°C to 85°C
• Insulation resistance: 1000MΩ minimum   • Withstanding voltage: 1500V/min.
78300: AMP60G male 6-pin PCB mount connector
• Material of post: tin-plated brass   • Diameter of post: .09"
78326: AMP50G female 6-pin housing connector • Material: nylon
78318: AMP501T terminal pin
• Material: tin-plated brass

78318   78300   78326

✳ **Prepackaged: order in increments of 10, 100 or 1000**

Part No.	Description	L	W	H	Dia	Use With	1	10	100	1000
78300	6-pin male connector	.93"	.37"	.57"	—	—	$.45	$.39	$.35	$.31
78326	6-pin housing connector	.94"	.25"	.74"	—	78300	.35	.31	.28	.25
78318	Power terminal pin, female	.69"	—	—	.09"	78326	✳	.11	.08	.07

BNC Coax Male Connectors

BNC connectors are miniature, lightweight units designed to operate up to 11GHz and typically yield low reflection up to 4GHz.

SALE

BNC with Pin and Ferrule

Part No.	Description	1	10	100	500
135618	RG6	$.69	$.55	$.34	$.31
71482	RG58	1.39	1.25	1.09	.95
71271	RG59/62	1.19	.95	.69	.49
112109	RG174	1.39	1.25	1.09	.79

SMA/SMB 50Ω Coax Cables

• SMA male to SMA male

Part No.	Cable	Length (ft.)	1	10	50
163854	RG174	1	$4.49	$3.95	$3.39
153381	RG174	2	4.95	4.29	3.39
153390	RG174	4	5.49	4.75	4.29
159450	RG174	6	6.79	6.15	5.55

BNC Coax Cables

11404   111472

RG58/U 50Ω Cables

• For Ethernet networks, oscilloscopes

Part Number	Mfr. Cross Ref. No.	Lgth (ft.)	1	10	50	100
11404	CRG58-3	3	$3.65	$3.29	$2.99	$2.69
102331	CRG58-6	6	3.69	3.29	2.99	2.69
180822	CRG58-10	10	4.49	3.99	3.39	2.99
169818	CRG58-15	15	5.49	4.95	4.19	3.79
102365	CRG58-50	50	8.95	7.85	6.29	5.49

RG174/U 50Ω Cables

• For Ethernet networks, oscilloscopes

Part Number	Mfr Cross Ref. No.	Lgth (ft.)	1	10	50	100
111472	RG174U3	3	$3.85	$3.49	$3.15	$2.85
111481	RG174U6	6	4.59	4.15	3.75	3.35

BNC PCB Connectors

- **146528**: Ideal for applications where multiple insertions require a connector which can endure the stress of high torque • **146510/161656**: Maintains matching impedance at 50Ω & 75Ω. Ideal for LAN cards & precision video

146528

146510

161656

Part No.	Description	Length (L)	1	10	100	500
146528	BNC straight metal	.719"	$2.49	$2.25	$2.05	$1.85
146510	BNC right-angle plastic insulation	1.37"	2.29	1.99	1.79	1.59
161656	BNC right-angle metal	.861"	2.29	1.99	1.79	1.59
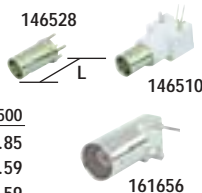
Modular Data Network Cables

- 24 AWG (7 x 43) stranded
- UTP • 8P8C
- "Snagless" boot
- High-flexibility • 4 pair
- Color coded for easy wire tracing

Blow-out Prices!

Category 5 (100MHz)

124741 **124863**

Part No.	Description	Color	1	10	100
201662	3ft. cable RJ45	Gray	$1.15	1.05	$.95
201671	15ft. cable RJ45	Gray	2.39	2.15	1.95
124724	3ft. cable RJ45	Red	1.15	1.05	.95
124741	15ft. cable RJ45	Red	2.39	2.15	1.95
124847	3ft. cable RJ45	Black	1.15	1.05	.95
124863	15ft. cable RJ45	Black	2.39	5.85	5.25
124804	3ft. cable RJ45	Blue	1.15	1.05	.95
124821	15ft. cable RJ45	Blue	2.39	2.15	1.95
170190	25ft. cable RJ45	Blue	3.55	3.25	2.89
124687	3ft. cable RJ45	Yellow	1.15	1.05	.95
124695	7ft. cable RJ45	Yellow	1.49	1.35	1.25
124708	15ft. cable RJ45	Yellow	2.39	2.15	1.95
170299	25ft. cable RJ45	Yellow	3.55	3.25	2.89

Bulk Modular Network Cables

- 100MHz
- Color: gray
- UTP • 8C
- 4 twisted pairs
- Insulation: polyethylene
- Nom. OD.: 189"
- Nominal impedance: 100Ω

118130

Solid: uses modular plug P/N 119343, far right
Stranded: uses modular plug P/N 79281, far right
- **Prepackaged and priced in increments of 25' or 100'**

24 AWG UTP Category 5 – 100MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
118130	Stranded 7/32 AWG	$5.95	$19.35	$164.50

24 AWG UTP Category 5e – 350MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
176225	Solid	$5.00	$17.00	$100.00
176233	Stranded	6.00	21.00	180.00

RJ45 Keystone Wall Plates

195549 **195557** **195565** **195573** **195581**

- Color: ivory • Size: 2.8"W x 4.5"H

Part No.	No. of ports	1	10	100
195549	1	$1.25	$1.15	$.99
195557	2	1.25	1.15	.99
195565	3	1.25	1.15	.99
195573	4	1.25	1.15	.99

135 More Networking Accessories @ www.Jameco.com

RJ45 Modular Jacks

Punchdown Keystone Type

- Removable jacks used in wall plates (clip in)
- CAT 5e classification
- Punchdown type wiring connections with color coding • 8P8C

195602 **195611**

Part No.	Color	1	10	100
195590	Red	$3.59	$3.39	$3.19
195602	Yellow	3.59	3.39	3.19
195611	Green	3.59	3.39	3.19
195629	Black	3.59	3.39	3.19
195637	Ivory	3.59	3.39	3.19
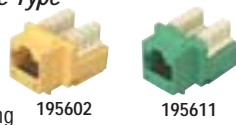
Cat 5e Crossover Cable

- Connect 2 PCs without a hub
- 24AWG (7 x 43) stranded
- Strain relief RJ45 connectors
- 4-pair • 8P8C • UTP

Part No.	Description	1	10	100
169261	10' cable RJ45, gray	$6.95	$6.25	$5.59

Modular Jack Boxes & Wall Plate

W/E = Western Electric type no.
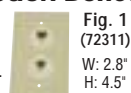
Fig. 1 (72311) W: 2.8" H: 4.5"

Fig. 2 (71651) W: 2.0" H: 2.2" D: 0.9"

Part No.	Description	W/E	Fig.	1	10	100
72311	6P6C & 8P8C double wall jack plate w/ jacks	—	1	$1.95	$1.75	$1.57
103464	6P4C adhesive jack RJ11	625A-4	2	1.39	1.19	1.09
71984	6P6C adhesive jack RJ11	625BS-6	2	1.39	1.19	.99
71651	8P8C adhesive jack RJ45	635	2	1.95	1.65	1.45

Network Starter Kit

- Single chip controller on PCI network card complies to bus specification 2.1
- Conforms with IEEE standards
- Shielded RJ45 connector on network card
- On-board socket for an optional remote boot ROM
- LED diagnostic to monitor network conditions
- 5-port hub supports 10/100Mbps
- Auto negotiation capability • Up-link port for expansion

Includes: Two each PCI network cards and 15' straight-through cables, 5-port mini hub, 7.5VDC @ 1A wall transformer, 3.5" diskette drivers, and manual

Part No.	Description	1	10
208469	Network starter kit	$64.95	$58.49

Network Expansion Accessories

Part No.	Description	*SALE*	1	10
201671	15' cable RJ45		$2.39	$2.15
173606	PCI ethernet card		14.95	13.49

Single-Line Telephone Filter

In-line Z-BLOCKER® filter blocks interference between DSL/HPN, voice and RF from cordless phones. Plugs directly into any standard phone jack and works with any single line phone, fax or dial-up modem.

Part No.	Description	1	10	25
196429	Telephone filter	$7.95	$7.16	$6.44

Modular Plugs

79290 **79273** **79281** **119343**

P = No. of positions   C = No. of contacts
W/E = Western Electric type number

✴ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	W/E	1	10	100	1000
79290	6P4C (RJ11)	623	✴	$.15	$.12	$.11
79273	6P6C (RJ11)	623	✴	.20	.19	.18
79281	8P8C (RJ45) (for stranded wire)	641	✴	.28	.24	.20
119343	8P8C (RJ45) unshielded (for solid wire)	—	.49	.44	.35	.28

Modular Jacks

105945 **204169** **124038** **115844**

- PC mount
- Voltage rating: 150 volts AC max.
- Contact current rating: 1.5 amp max. @ 25°C
- Durability: 750 mating cycles

Part No.	Description	W/E	1	10	100
105945	6P4C (RJ11) top flange	623	$.62	$.52	$.45
204169	6P4C (RJ11) dual	—	1.09	.99	.89
124038	6P6C (RJ11) 6" leads	—	1.25	1.15	.99
115844	8P8C (RJ45)	641	.69	.62	.55

RS-232-to-RJ11/RJ45 Modular Jack Adapters

66181 **66237**

Change your RS-232 port to a RJ11 or RJ45 modular jack. This will allow you to use modular phone cable rather than RS-232 cable, thus simplifying networking applications. Comes complete with wiring and hardware.

Part Number	Cross Ref. No.	Description	1	10	100
66181	G9P6	DB9 M to RJ11(6P6C)	$2.59	$2.35	$2.09
66190	G9P8	DB9 M to RJ45(8P8C)	2.49	2.25	2.05
114737	G9S4	DB9 F to RJ11(6P4C)	2.49	2.25	2.05
66211	G9S8	DB9 F to RJ45(8P8C)	2.99	2.69	2.45
66229	G25P6	DB25 M to RJ11(6P6C)	2.95	2.35	1.99
66237	G25P8	DB25 M to RJ45(8P8C)	2.99	2.69	2.45
204273	TMA-105	DB25 F to RJ11(6P4C)	2.69	2.45	2.19
66245	G25S6	DB25 F to RJ11(6P6C)	2.59	2.29	1.99
66253	G25S8	DB25 F to RJ45(8P8C)	2.89	2.59	2.29

Modular Cable Tester with Remote Terminator

Easily read correct pin configuration of 10baseT, 10base2, RJ45/RJ11 modular cables, 258A, TIA568A/568B, token ring, etc. Test installed cables either on wall plate or patch panel from a distance.

- Check for cable continuity, miswiring, open, short, grounding and pin configurations
- Cable adapters: RJ45 M-M, 2 RJ45M-BNCM and BNC F-F
- On-board connectors: 2 RJ45F (tester) and 1 RJ45F (remote)
- Size: 4.0"L x 2.5"W x 1.0"H (Main console)
- Size: 4.0"L x 1.3"W x 1.0"H (Remote) • Wt.: 0.7 lbs

Includes: Manual and test cables

Part No.	Description	1	10
145710	Modular cable tester	$84.95	$76.49

RS-232 Line Status Tester

Identifies simple interface problems which you can repair yourself. Targets the status of lines 2, 3, 4, 5, 6, 8, 11, 19 and 20. Connectors: male to female DB25.

Part No.	Description	1	10	100
14285	Check line tester	$7.95	$6.49	$5.95

Flexible Multilink RS-232 Tester & Breakout Box

Visually indicates the status of lines 2, 3, 4, 5, 6, 8, 20 and 22 on the DTE and DCE sides. Provides signal status at a glance.

Complete cable "breakout" & reconfiguration. Connectors: DB25 male & DB25 female.

- Cable length: 4" • Size: 3.5"L x 3.3"W x 1.0"H

Includes: handy carrying case, 10 jumper wires and a device wiring chart

Part No.	Description	1	10	25
25945	Tester/breakout box	$22.95	$19.95	$17.95

ISA Fast SCSI-II Controller

- Compatible with DOS, Windows®, Windows® NT, Windows® 95, OS2 Netware, and SCO Unix
- Internal and external SCSI-II connectors
- Size: 6.3"L x 2.9"W

Includes: Setting sheet, ribbon cable, and software (3.5" disk)

Part No.	Description	1	10
149294	ISA SCSI-II controller	$44.95	$39.95

Internal & External Modems on our website.

iscover what you are looking for @ www.Jameco.com

Black Magic

Switching inverter that produces low-frequency alternating current to signal telecom ringers or equivalents.

- Frequency: 20Hz
- Series resistor: 300Ω
- Nominal output voltage: 86 Vrms
- No reverse polarity protection
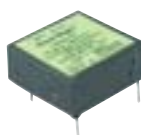
Part No.	Product No.	1	10	25
145816	LBMR12	$26.95	$24.49	$21.95

Telephone Ringing Generator

ZOOM ISA 33.6kbps Internal Fax/Modem

- 16550 UART with 16-byte bidirectional buffer for faster data throughput
- AT command compatible
- Group 3 FAX, class 1 and 2
- True V.34 (ITU intl. standard) 28.8kbps technology
- Supports V.34 ITU standard and V.Fast Class
- V.17 protocol for 14.4kbps fax capability
- V.42bis and MNP 5 data compression
- Ability to manually force MNP 5, V.42bis, V.42 or MNP 4   • Size: 4.6"L x 2.5"W
- Auto negotiation of data compression and error correction

Part No.	Description	1	10
181796	Internal fax/modem	$24.95	$22.49

QUIKLINK Automatic Telephone Ring Down Unit

- Applications: elevator and door entry phones; in-office and off-premise emergency hotlines; tie lines between phones, PABX and Key systems; CO line simulators for sales demonstrations; testing rings, answering, and signal path functions in telecom repairs, installation and production
- Ringing power: 70V @ 20Hz modified square wave
- Power input: 12VAC @ 700mA (max.)
- Line feed type: two wire unbalanced
- Max. loop resistance: 600Ω   • Term.: 4-40 screws
- LED hook status indicator; ringing cadence: continuous/1 second on 1 sec. off/2 sec. on 2 sec. off/2 sec. on 4 sec. off; additional power input: 20-28VDC @ 300mA max.; RJ11 terminations

Part No.	Dimensions	1	10
179936	4.2"L x 2.5"W x 0.5"H	$99.95	$89.95

AT&T Fax Switcher

- Features automatic ring reduction, answering system transfer and transfer timer, extension in use detection and calling tone detection, dial pulse / rotary transfer, unanswered call transfer, reverse modem detection, remote call alert, line interrupt protection, calling tone detection
- System capacity: line-in, answering machine, phone, modem/fax connection

Includes: 12VAC @ 830mA power supply, 6' 11" telephone cable, and manual

Part No.	Product No.	Description	1	10
152004	ATT200A	Fax switch	$24.95	$17.95

PCI 56kbps Fax/Modem/Voice

- Motorola 62412-51 chipset
- Data ITU-T V.90 and 56Flex compatible
- ITU-T V.34; V.32bis; V.32; V.22bis; V.22
- V.42bis and MNP-5 data compression compatible
- Full duplex speaker phone
- V.42 and MNP2-4 error correction compatible
- V.80 (H.324 video conferencing interface compatible)
- V.17 (14.4kbps Fax)   • Voice/audio mode
- Size: 4.7"L x 2.8"W   • Weight: 0.6 lbs.

Includes: Manual, cable and drivers on CD-ROM

Part No.	Description	1	10
172881	PCI 56kbps modem	$29.95	$26.95

PHOEBE External 56kbps Fax/Modem

- Five fault locating tests
- Ultra reliable data transfer using V.42 bis/MNP5 error correction
- FCC compliance
- 9-pin serial interface
- PC/XT/AT and Pentium® compatibles
- Data compatible to ITU-T V.34; V.32bis; V.32; V.22bis; V.22; V.21; Bell 212A and 103
- Fax compatible to ITU-T V.17; V.29; V.27ter; V.21
- Error checking compatible to V.42bis and MNP 2-4
- Data compression compatible to V.42 and MNP 5
- Enhanced AT command set, Fax class 1 and 2
- Data compatible to IUT-T V.90 and K56 Flex
- Size: 5.9"L x 4.6"W x 1.3"H   • Weight: 2.3 lbs.

Includes: Serial and phone cable, CD-ROM drivers and manual, and 12VAC @ 1A power supply

Part No.	Description	1	10
145031	Serial modem (Rockwell)	$69.95	$62.95

PCI Ultra ATA/133 Controller Card

Supports IDE devices to transfer data at maximum burst rate of 133Mbytes/sec. Backward compatible with all ATA/66 and ATA/100 IDE devices.

- Supports 4 IDE devices
- 133Mbytes/sec burst data rate on PCI local bus and IDE bus
- Widest range of compatible IDE/ATAPI devices
- Supports Windows® 98/ME/NT4.0/2000/XP
- Enhanced BIOS on board   • Size: 5.2"L x 2.5"W

Includes: 80-wire/40-pin cable, 3.5" drivers & manual

Part No.	Description	1	10
208021	Ultra 133 controller card	$49.95	$47.45

Short Haul Modem

- Up to 38,400 baud
- Will communicate over 6.3 miles of cable
- No external power required
- DCE/DTE selectable
- Xon-Xoff or hardware handshaking
- RS-232 interface (DB25 female)

ATEN

Part No.	Description	1	10	25
116581	Short haul modem $29.95	$26.95	$23.95

Part Number Color Code Legend
Sale Refurbished Closeout

ISA IDE Super 16-Bit I/O Plus

Supports 2 IDE and 2 Floppy Drives

- Parallel printer port interface(P/N 131318 is bidirectional)
- Game port
- Two RS-232 serial ports
- UART emulation: **67061:** 16450; **131318:** 16550
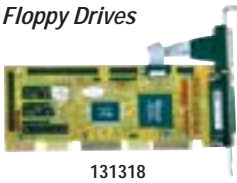
131318

Includes: Manual and cables

Part No.	Description	1	10
67061	16450 UART I/O	$14.95	$13.49
131318	16550 UART I/O	29.95	26.95

PCI Ultra High-Speed I/O

Serial 16C550 and Parallel Port

- 32-bit PCI bus with PCI bus 2.1 specification compliant
- Serial ports are software configurable w/ throughputs up to 921.6kbps
- BPP/SPP mode compliant
- Windows® 95/98/NT 4.0 drivers supported

SALE

169594

169594: 2 serial DB9M on card and 1 parallel DB25F panel bracket assembly

Part No.	Description	1	10
146667	Dual serial (16C550)	$49.95	$46.95
169594	2 serial (16C550) and 1 parallel	49.95	47.49

PCMCIA RS-232 Interface

PC card/PCMCIA-based serial port card.

- Low cost single port RS-232 interface
- Uses 16550 UART
- 5, 6, 7 or 8 data bits
- Odd, even or no parity
- 115k baud data rates
- Configured as COM1, COM2, COM3 or COM4
- PCMCIA type II compliant

Includes: 1' cable

Part No.	Description	1	10
164451	PCM-COM232 card	$99.95	$89.95

PCI High-Speed Multi-Port Serial I/O

2, 4 or 8 16C650 Serial Ports

- 32-byte FIFO
- Plug & Play compatible
- Standard RS-232 interface
- Transfer rate: up to 921kb/sec.
- Supports IRQ sharing
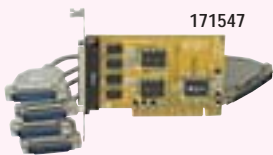
171547

172005: Dual 16C650 Serial Ports
- Two DB9 male connectors
Includes: Manual and drivers on CD-ROM & floppy

171547: Quad 16C650 Serial Ports
Includes: Manual, cable (37-pin male to 4 DB25 male) and drivers on CD-ROM

171660: Eight 16C650 Serial Ports
Includes: Manual, internal cable with bracket, 2 cables (37-pin male to 4 DB25 male) and drivers on CD-ROM

System requirements: 486 and higher compatible, Windows® 95/98/NT/2000

Part No.	Description	1	10
172005	2-port PCI serial	$59.95	$53.95
171547	4-port PCI serial	129.95	116.95
171660	8-port PCI serial	179.95	161.95

ISA 1 & 2-Port High-Speed Serial I/O

Single & Dual 16C650 UART Ports

- 16-byte FIFO
- Transfer rates up to 921kb/sec.
- IRQ (3, 5, 7, 9, 10, 11, 12, 15) and address jumper configurable
- Weight: 0.5 lbs.

171555

171504: Single High-Speed Serial Port
- RS-232 V24 standard serial interface
- 1 DB9 male connector • Size: 5.0"L x 2.0"W

171555: 2 High-Speed Serial Port
- 2 DB9 male connectors • Size: 5.0"L x 2.7"W

System requirements: 486/586 and higher compatibles; Windows® 95/98/NT/2000

Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10
171504	Single serial	$18.49	$16.89
171555	Dual serial	24.95	22.49

Serial Port Complete

Lakeview Research RS-232 & RS-485 are the most versatile, inexpensive interfaces for linking, but the hardware & programming are often misunderstood. This book provides you with everything you need to design, program, install and troubleshoot the links you set up. (306 pages, 1998)

Includes: 3.5" diskette

Part No.	Description	1	10
154771	Serial Port Complete Book	$39.95	$35.95

PCI Ultra High-Speed Parallel

Single Ultra High-Speed Port

- Supports ECP and EPP
- Transfers data up to 2MB/sec.
- Plug & Play ready
- 32-bit PCI interface
- 32-byte FIFO
- Supports IRQ sharing
- 1 DB25 female connector
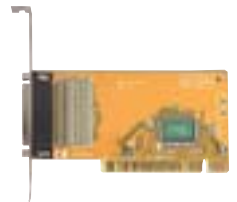
System requirements: 486/586 and higher compatibles; Windows® 95/98/NT/2000

Includes: Manual and drivers on CD-ROM

Part No.	Description	Size (L"xW")	Weight (lbs.)	1	10
171926	PCI single parallel	4.7 x 2.2	0.5	$39.95	$35.95

Diagnostic Card for PCI-Bus Systems

UX ULTRA-X

This is the first diagnostic card for monitoring Power-On-Self-Test results in systems using PCI-Bus architecture.

- Plugs into any PCI I/O slot
- Digital indicators for every POST code error
- LEDs for monitoring power (DC): +12, -12, +5, +3
- LEDs for clock and reset failure
- Comprehensive manual w/ error codes from all major BIOS manufacturers including AMI, AWARD, PHOENIX and more
- One-year warranty

Part No.	Description	1	10
135108	PCI-POST diagnostic card	$219.95	$197.95

Computer Monitor & NTSC Tester

Mac, PC and TV

- Tests VGA, Super VGA, Mac monitors and TVs
- Checks full-field color bars, color raster, dots (static and dynamic convergence), cross-hatch and windows (power supply regulation, checks for a clear distinction between white and black portions)
- Connectors: HDDB15F, DA15F
- Two video connectors for TV, composite and S-video
- Power with either a 9V battery or an external DC adapter (recommend P/N 151095, pg 59 or P/N 100845, see website)
- One-year warranty
- Size: 5.5"L x 3.0"W x 1.4"H • Weight: 0.7 lbs.

GME

Part No.	Description	1	10
149729	Computer monitor tester	$189.95	$179.95

Industrial Communications

RS-232 to RS-485/422 Bidirectional Converters

ATEN

- Cable length: 4000' max.
- Data rate: 1MB/second
- 4-wire full duplex or 2-wire half duplex
- Controlled by RTS signal
- Point-to-point and multidrop operations
- RS-485: terminal block & RJ11 connections
- RS-232: DB25 female connector • Input: 110VAC

117701

197931: port powered • Data rate: 100kbps
122956: features RS-485SI optical isolation: 2000V

Includes: 9VDC @ 300mA power adapter

Part No.	Description	1	10
117701	RS-232-485/422	$57.95	$51.95
197931	RS-232-485/422	64.99	58.49
122956	RS-232-485/422 OPT ISO	119.99	107.99

GPIB IEEE-488.2 Board

PCI Bus

- 1 MB/s transfer rates • 1024 word FIFO buffer

Part No.	Mfr. Cross Ref. No.	1	10
177121	PCI-GPIB-1M	$398.95	$358.95

More @ www.Jameco.com

See our website for more Industrial Communication Products.

2-Port USB-A PCI Card

- Plug & Play compatible
- Uses VIA VT83C572 controller chip
- USB specification V.1.1 compatible
- USB legacy BIOS supports
- Operates in USB-aware operating system (Win® 95, 98)

Includes: Manual

Part No.	Description	1	10	25
155299	PCI USB	$24.99	$22.49	$20.25

2-Port USB-A PCMCIA Card

- PCMCIA type-II card
- New 32-bit CardBus
- Size: 4.6"L x 2.1"W
- USB 1.1 OHCI USB standard; 12Mbps max. speed

System requirements: Windows® 98, ME, 2000 and Mac OS 8.6 or later   **Includes:** Manual

Part No.	Description	1	10
189499	USB 1.0 CARD BUS card	$69.95	$62.95

USB-A Female Cables & Bracket

- Supports data transfer rates of 12Mbps
- Allows connection of two devices
- Dual USB-A female connectors   • 8" long

Part No.	Description	1	10	25
144813	USB-A panel mount	$6.95	$6.25	$5.59

USB-to-RS-232 Serial Converter

- Real Plug & Play and Hot-Plugged device
- 1 upstream port with USB-B female connector
- 1 downstream port with DB25 female connector
- Compliant with USB specification Rev. 1.1
- No power consumption
- Automatic USB protocol handling
- Size: 3.0"L x 2.2"W x 0.8"H   • Weight: 0.6 lbs.

System requirements: IBM compatible PC with Pentium® processor and USB connectivity, Windows® 98/OSR 2.1 & 16MB of RAM

Includes: 6' USB-A male to USB-B female cable and 3.5" driver diskette

Part No.	Description	1	10
164048	USB-B to serial converter	$54.99	$49.49

External 3-Port USB Thumbhub

Expand your single USB port to a stacked 3-port thumbhub.

- USB Revision 1.1 compliant
- Downstream port with OCD (over current detection) and OCP (overcurrent protection)
- LED indicators uplink/down port communication, and OCP status
- Supports full speed (12Mbps) and low speed (1.5Mbps) transfer rate   • Self-powered mode
- Compatible with Windows® 98/98SE/2000/ME/MAC OS8.5
- Size: 3.1"L x 0.8"W x 1.2"H

Part No.	Description	1	10
208451	3-port thumbhub	$18.95	$16.95

External USB 2.0 4-Port Hub

This hub allows you to connect and add any USB 2.0 peripherals to your PC. USB 1.1 backward compatible allowing all previous devices that you may have function as usual.

- Supports 1.5Mbps low speed, 12Mbps full speed, and 480Mbps high speed data transfer rate
- One USB-B female upstream port and 4 USB-A female downstream port
- Connects up to 127 devices through cascading multiple hubs   • Supports self-powered mode

System requirements: Pentium® 233Mhz or higher and MAC PCs, 64MB of RAM, available USB port, Windows® 98SE/ME/2000/XP/Mac OS

Includes: 5VDC@4A power supply, USB-A male to USB-B male cable, and manual

Part No.	Description	1	10
209007	4-port hub	$59.95	$53.95

External 7-Port USB Hub

- 7 USB-A female output ports
- USB-B female root port
- Plug & Play compatible
- Allows you to attach 127 USB devices to your PC
- LED indicators for port, status, and power
- Size: 7.9"L x 2.8"W x 1.1"H   • Weight: 2.6 lbs.

Includes: 6VDC power adapter and USB-A male to USB-B female cable

Part No.	Description	1	10
191450	7-Port USB hub	$44.95	$39.95

USB Cables

175417   175425   199806

USB-A Male to USB-B Male

Part No.	Description	1	10	25
175417	3' cable	$4.49	$3.99	$3.59
169359	6' cable	4.95	4.49	3.95
169367	10' cable	5.95	5.25	4.59

USB-A Male to USB-A Male

Part No.	Description	1	10	25
175425	3' cable	$3.95	$3.49	$2.95
175433	6' cable	4.95	4.49	3.95
175441	10' cable	5.95	5.25	4.59

USB-A Male to USB-A Female Extension

Part No.	Description	1	10	25
199806	10' cable	$5.95	$5.25	$4.59

USB-A to Joystick (DB15) Adapter

- Fully compatible with any 15-pin game port PC game controller
- Mode switch selector for maximum compatibility and flexibility
- USB Plug & Play
- Input connector: USB-A male
- Output connector: DB15-pin female connector
- Size: 3.2"L x 2.3"W x 1.3"H

System requirements: 586 or higher compatible; available USB-A port or Hub; Windows® 98 or higher

Includes: Manual and 3.5" drivers

Part No.	Description	1	10
189510	USB to game port adapter	$39.95	$28.95

USB Gender Adapter
USB-A to USB-B

- USB-A (female) to USB-B (male)

Part No.	Description	1	10	25
169375	1.7"L x 0.6"W	$6.95	$6.35	$5.59

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See our latest additions of USB Products on the web.

Video and Monitor Cables

RGB Video Cables

- 75Ω coaxial cable; 6' or 10'
- Pin 1 red, pin 2 green, pin 3 blue, pin 14 white/black vertical, pin 13 gray horizontal
- 5 BNCs to HDDB15-pin male

73648

Part No.	Description	1	10	25
73648	6' cable (black)	$19.95	$17.95	$16.15
118068	10' cable (black)	31.95	28.95	21.95

VGA Monitor Cables

- Connects video card to VGA monitor
- IBM PC/XT and higher compatibles
- HDDB15 male to male

66173

Part No.	Description	1	10	100
66173	6' monitor cable	$6.49	$5.89	$5.29
148523	10' monitor cable	6.95	6.25	5.59

VGA Monitor Extension Cables

- Extends VGA monitor cable; HDDB15 male-to-female
- IBM PC/XT and higher compatibles

134041:
- HDDB15 female with hex nuts and HDDB15 male with thumbscrews

66165/148531:
- Thumbscrews on each end

134041

66165

Part No.	Description	1	10	100
134041	6' screws/hex nuts	$4.49	$3.95	$3.49
66165	6' thumbscrews	5.99	5.39	4.85
148531	10' thumbscrews	7.49	6.79	5.99

Do you see what you are looking for?
Log onto www.Jameco.com for much more.

DB9 Extension Cables
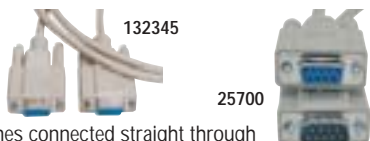
132345
25700

- All lines connected straight through

132345/196365:
- DB9 female to DB9 female cable with thumbscrews

25700/148515:
- DB9 male to DB9 female cable with thumbscrews

181665: • DB9 male to DB9 male cable

Part No.	Description	1	10	100	1000
132345	6' F-F	$4.95	$4.49	$3.95	$3.49
25700	6' M-F	6.49	5.79	5.19	4.69
196365	10' F-F	6.95	6.25	5.59	4.95
148515	10' M-F	7.49	6.79	5.99	4.95

DB25 Extension Cables

- All lines connected straight through
- Use to lengthen your standard serial cable or for switch box applications
- Thumbscrews to secure connectors
- Color: gray; except P/Ns **174001/175290**: black*

67256
SALE

Part No.	Description	Wt. (lbs.)	1	10	50	100
174001	3' M-M*	0.6	$4.29	$3.89	$3.49	$2.95
65787	6' M-M	0.5	6.49	5.89	5.29	4.89
39538	10' M-M	0.7	6.95	5.59	4.19	2.95
67070	25' M-M	1.4	10.95	9.95	8.95	7.95
164291	3' M-F	0.4	3.99	3.19	2.39	1.69
175290	3' M-F*	0.4	2.95	2.39	1.79	1.25
163133	5' M-F	0.6	3.95	3.55	3.19	2.89
67256	6' M-F	0.6	6.45	5.79	5.25	4.69
39511	10' M-F	0.7	6.95	5.59	4.19	2.95
101995	25' M-F	1.4	10.95	9.95	8.95	7.95

IEEE 488 Cables

A variety of cable lengths are offered to ensure that the IEEE system requirements are met (20 meters maximum length with a maximum of 15 devices). These cables are standard IEEE 488 cables with stackable 24-pin GPIB connectors on both ends.
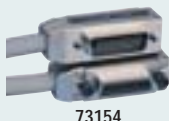
73154

- Color: gray

Part No.	Description	Wt. (lbs.)	1	10	25
73154	1 meter	0.8	$36.49	$32.79	$29.49
115781	2 meter	1.2	37.95	34.19	30.95
115801	4 meter	2.0	34.95	26.25	18.39

PS/2 Keyboard Extension Cables

- Color: beige
- PS/2 computers
- 6-pin mini DIN female-to-male

28548

Part No.	Description	1	10	100
28548	PS/2 6' non-coiled	$4.35	$3.89	$3.49
111053	PS/2 10' non-coiled	5.49	4.99	4.39

AT-to-PS/2 and PS/2-to-AT Keyboard Adapter Cables

28003:
- Connects AT-type keyboards to PS/2
- 5-pin female DIN to 6-pin male mini DIN

85500:
- Connects PS/2 keyboard to AT
- 6-pin female mini DIN to 5-pin male DIN connectors

28003

Part No.	Length	Color	Wt. (lbs.)	1	10	100
28003	7.3"	Beige	0.6	$3.95	$3.49	$3.15
85500	11.3"	Beige	0.8	4.95	4.49	4.05

RJ11 & RJ45 Retractable Cables

These auto-reel retractable cables are compact and convenient solutions for the mobile professional.

208362
208371

208362: RJ11 type
- For telephone and modem applications
- Cord length: 9'6"
- Includes: Inline coupler

208371: RJ45 type, Cat 5
- For telephone, modem & networking applications
- Cord length: 6'11"

Includes: RJ45 right angle adapter and RJ45 to telephone outlet adapter

Part No.	Description	1	10
208362	RJ11 cable	$9.95	$8.95
208371	RJ45 cable, Cat 5	19.95	17.95

Save Space! Slim-Line D-Sub Gender Changers

18497
119319
119301

These revolutionary slim-line gender changers are only 0.69" wide, eliminating the space problems caused by standard gender changers. When plugged into your existing cable, they add only 0.44" to the cable. All-metal cases.

- Captive locking screw (male)
- Captive locking nut (female)
- Grounding tangs (male)

Part No.	Description	1	10	100
18497	D-sub 9-pin male	$4.95	$4.49	$3.99
18489	D-sub 9-pin female	4.95	4.49	3.99
119319	D-sub 15-pin female HD	4.95	4.49	3.95
119301	D-sub 15-pin male HD	4.49	4.05	3.65
18446	D-sub 25-pin male	4.95	4.49	3.99
18420	D-sub 25-pin female	4.95	4.49	3.99

AT and PS/2 Keyboard Adapters

159089:
AT keyboard adapter
- Connects PS/2 keyboard to AT
- 6-pin female mini DIN to 5-pin male DIN

159089

157930:
PS/2 keyboard adapter
- Connects AT type keyboards to the PS/2
- 5-pin female DIN to 6-pin male mini DIN (PS/2)

157930

Part No.	Length	Housing	1	10	100
159089	1.6"	Metal	$3.49	$3.15	$2.85
157930	1.7"	Plastic/metal	3.49	3.15	2.85

Switch Box Adapter Cables

177261:
- 2' gray 6-pin mini DIN M-M non-coiled cable for P/N 79177 switch box, see website

114913:
- 5' gray 5-pin DIN M-M coiled cable for P/Ns 114163/114155 switch boxes, see website

174772

174772:
- 6' black 6-pin mini DIN M-M

174908: • 6' gray 6-pin mini DIN M-M

112627: • 10' gray 6-pin mini DIN M-M non-coiled cable for P/N 79177 switch box, see website

Part No.	Description	Length	1	10	50
177261	6-pin mini DIN	2' (gray)	$2.95	$2.25	$1.59
114913	5-pin DIN	5' (gray)	4.95	4.49	3.95
174772	6-pin mini DIN	6' (blk)	4.95	3.69	2.59
174908	6-pin mini DIN	6' (gray)	5.75	5.15	4.65
112627	6-pin mini DIN	10' (beige)	7.95	7.25	6.49
205655	6-pin mini DIN	25' (beige)	8.95	7.95	6.95

Serial Null Modem Cables

180697
180582

- Molded type connectors
- Color: gray
- Weight: 0.4 lbs.
- Length: 10'

180697 Pin outs:
1–7 & 8; 2-3; 3-2; 4-6; 5-5; 6-4; 7 & 8-1

180582 Pin outs:
2-2; 3-3; 4-5 & 6; 5-7; 6 & 8-20; 7-8; (Serial Printer Null Modem)

Part No.	Description	1	10	50
180697	DB9 F to DB9 F	$6.79	$6.09	$5.49
180582	DB25 M to DB9 F	6.69	6.05	5.45

Order Anytime 24x7x365

Phone 1-800-455-6119   Fax: 1-800-237-6948

Online: www.Jameco.com

ATX 150-Watt

- **Output:**
  +3.3V @ 6A
  +5V @ 10A
  +12V @ 6A
  +5VSB @ 0.72A
  -5V @ 0.2A -12V @ 1A
- 20-pin ATX form factor
- Mating input conn.: suggest using P/N 38050 power cord, pg 19 – not included • Built-in fan
- Input volt.: 115/230VAC @ 50-60Hz (auto switching) • Power on/off switch

Part No.	Product No.	Description	1	10	25
196189	MPW-6150F	150W	$34.95	$31.49	$27.95

Special Purchase LOW LOW PRICE

ATX 250-Watt

- **Output:**
  +5V @ 20A
  +12V @ 10A
  -5V @ 0.5A
  -12V @ 0.5A
- Fits popular mini-vertical and desktop cases
- Input voltage: 110-220VAC @ 50-67Hz (switchable)
- AT compatible connectors
- One-year warranty • Weight: 2.0 lbs.
- Size: 5.5"L x 5.9"W x 3.4"H

Part No.	Prod. No.	Description	1	10	25
174465	LC250C	250W	$49.95	$44.95	$39.95

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Jameco is your Power Source. See our website for additional PC Power Supplies.

Part Number	Mfr.	Product Number	Watts (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector (Mating Connector/Cord)	Output Connector (Mating Connector)	Certification	Size (L" x W" x H")	Wt. (lbs.)	1	10	25
196189	Emaos	MPW-6150F*	150	+3.3/6, +5/10, +12/6, +5VSB/0.72, -5/0.2, -12/1	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 57)	ATX	UL/CUL/TUV/CE	7.5 x 4.0 x 1.6	2.5	$34.95	$31.49	$27.95
196111	SPI	FSP23560GT	235	+3.3/14, +5/22, +12/8, +5VSB/0.8, -5/0.3, -12/0.8	100/240 @ 50-60 switchable	3-prong AC receptacle (P/N 38050, pg 57)	ATX	UL/CUL/TUV/CE	5.6 x 5.9 x 3.4	3.2	34.95	31.49	27.95
152514	High Power	JE8250	250	+3.3/16, +5/25, +12/10, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	5.5 x 5.9 x 3.4	3.3	49.95	44.95	39.95
174465	Logic Concept	LC250C*	250	+5/20, +12/10, -5/0.5, -12/0.5	110/220 @ 50-67 switchable	3-prong AC receptacle with 6' power cord	AT	UL/CSA/TUV/CE	5.5 x 5.9 x 3.4	2.0	49.95	44.95	39.95
152194	American Media	JE2031	250	+3.3/14, +5/25, +12/10, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	6.0 x 5.5 x 3.4	3.5	59.95	53.95	47.95
155539	American Media	JE2033	300	+3.3/14, +5/30, +12/8, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	5.9 X 5.5 X 3.4	3.7	69.95	62.95	56.95

* See photo above

Computer Switches, Sharing Devices & Converters

ATEN SVGA Monitor Splitters

Duplicate a video signal from one source to monitors up to 210 feet away.

- Suitable for SVGA, VGA & multisync monitors

176866 : 2-channel
- 1 HDDB15 male connector from PC to box; 2 HDDB15 female connectors from box to monitors
- Size: 6.6"L x 3.3"W x 1.1"H • Weight: 1.4 lbs.

133866 : 4-channel
- Slide switch for video signal gain control
- Daisy chainable • One-year warranty
- Size: 8.8"L x 6.0"W x 1.9"H • Weight: 3.6 lbs.

Includes: Power adapter and manual

Part No.	Description	1	10
176866	2-channel monitor splitter	$49.95	$44.95
133866	4-channel monitor splitter	68.95	61.95

Bidirectional Non-Buffered Serial-to-Parallel Converter

- Bidirectional conversion of parallel and serial signals
- Serial interface: hardware handshake RTS/CTS, software handshake XON/XOFF; DCE/DTE selectable; parity: odd, even, or no parity; data bits: 7, 8
- Connectors: one DB25 female and one Centronics 36-pin male
- Stop bits: 1 or 2 • Baud rate: 300 to 38,400bps

Includes: AC adapter (9VAC @ 200mA) and manual

Part No.	Description	1	10	25
116935	Bi-converter	$49.95	$44.95	$39.95

ATEN K/V/M Switch Boxes for up to 4 Computers

- Selects any computer by hot keys or switch
- Serial and PS/2 mouse & keyboard emulation for automatic PC boot up
- Three stage cascadable for accessing more computers
- Supports SVGA, VGA and Multisync monitors
- Keyboard LED status recorded and restored while switching among computers
- Auto scan for monitoring PC periodically
- One year warranty
- Size (149382): 9.0"L x 6.0"W x 2.0"H
  (149391): 10.0"L x 7.0"W x 3.0"H

149382 (front)
149382 (rear)
149391 (front)
149391 (rear)

Includes: Manual & power supply (9VDC @ 600mA)

Part No.	Description	Wt. (lbs.)	1	10
149382	2 computers	4.0	$149.95	$129.95
149391	4 computers	7.1	229.95	209.95

Find it @ www.Jameco.com

See our website for more Switch Boxes and Converters.

2-Way & 4-Way Monitor/Keyboard/Mouse-to-PC Switch Boxes

HDDB15/5-Pin DIN/DB9M

- Allows 2 or 4 users to share one PC system
- Internal diodes maintain keyboard in powered state when switching between systems
- Each user may need 2 or 4 sets of the following cables:
  P/N 66173, DB15HD M-M for monitor;
  P/N 114913, 5-pin DIN M-M for keyboard;
  P/N 132345, DB9 F-F for serial mouse (cables, pg 50)
- Size: 7.5"L x 5.3"W x 2.8"H

132249
134017

Part No.	Description	Wt. (lbs.)	1	10
132249	2-user switch box	1.6	$17.95	$15.95
134017	4-user switch box	2.3	21.95	19.95

Monitor/Mouse/Keyboard Cables

- 6' or 32'
- HDDB15 male/female for monitor, 5-pin DIN male/female for keyboard, and DB9 male/female for mouse

ATEN
141284

Part No.	Description	Wt. (lbs.)	1	10
141284	6' cable	1.6	$22.95	$19.95
141276	32' cable	4.8	39.95	35.95

Part Number Color Code Legend: Sale Refurbished Closeout

Order 24/7 Toll Free 1-800-455-6119

JAMECO

Keyboard/Monitor-to-PC Switch Box

HDDB15/5-Pin DIN Female
- 2-way switch box
- For 2 PCs connected to 1 keyboard and 1 monitor – diodes maintain keyboard in powered state
- Size: 6.0"L x 4.0"W x 2.3"H   • Weight: 1.3 lbs.

Part No.	Description	1	10
114155	2 computers	$14.95	$13.49

Serial Port-to-PC Switch Boxes

DB9 Female
- Connects 2 or 4 serial ports to a PC

79126: 2-serial port switch box
- Size: 6.0"L x 4.8"W x 2.5"H
- Weight: 1.2 lbs.

79126

183417: 4-serial port switch box
- Size: 6.1"L x 4.0"W x 2.2"H
- Weight: 1.3 lbs.

183417

Part No.	Description	1	10
79126	2-serial port switch box	$9.95	$8.95
183417	4-serial port switch box	19.95	17.95

Parallel Printer-to-PC Switch Boxes

DB25 Female
- Connects 2 or 4 PCs to one printer

20095

20095: 2-PC switch box
- Size: 6.0"L x 5.8"W x 2.3"H
- Weight: 1.3 lbs.

155512: 2-PC switch box
- Size: 7.2"L x 4.9"W x 2.5"H
- Weight: 2.3 lbs.

155512

Includes: DB25 M-M cable

20124: 4-PC switch box
- Size: 6.0"L x 4.0"W x 2.4"H   • Weight: 1.5 lbs.

20124

Part No.	Description	1	10
20095	2 PC switch box	$8.95	$7.95
155512	2 PC switch box	6.49	5.85
20124	4 PC switch box	14.95	13.49

Two-PS/2 K/V/M Switch Box

Allows one user with one keyboard, mouse and monitor to access two PS/2 systems.

- Switch between computers manually or via keyboard hot-keys
- Auto scan feature switches between computers
- Small design of switch increases work space
- Input connectors (from PC to switch box): 6-pin mini DIN female (PS/2) for keyboard and mouse, HDDB15 male for monitor   • Weight: 0.9 lbs.
- Output connectors (from switch box to user): 6-pin mini DIN female for keyboard and mouse; HDDB15 female for monitors   • Size: 6.7"L x 3.8"W x 1.4"H

Part No.	Description	1	10
190916	2 computer switch box	$69.95	$62.95
204062	6' cable	16.95	15.29

19" Rack Mount Enclosures

Perfect for equipment setup in home, studio or laboratory.

- Ventilation holes on all sides
- Front and back panels are steel w/ aluminum, pre-punched face plates
- Top, bottom, sides durable 0.035" steel
- Front panel: 0.12" Thick   • Black front panel
- All enclosures have handles except P/N 132812

Includes: Mounting screws

Part Number	Dimensions (In.)			Weight (lbs.)	Pricing	
	H1	H2	D		1	10
132812	1.73	1.25	9.75	6.2	$37.99	$34.19
132821	3.46	3.0	9.75	7.9	47.95	43.49
132839	3.46	2.88	11.75	9.1	53.95	48.59
132847	5.22	4.75	11.75	10.6	54.99	49.49
132855	5.22	4.75	13.50	11.8	73.95	66.95

Cabinet Mounting Plate for 19" Cabinet

- Use as industrial chassis mounting plate for servers, PCs or patch panels
- Made of industrial grade steel and aluminum
- Size: 19.0"W x 15.8"D x 3.5"H   • Color: beige

Part No.	Description	1	10
149500	Cabinet mount plate	$39.95	$35.95

Removable HD Rack and Insert

- For quick drive swapping
- Removable storage for 3.5" IDE drive
- Power LEDs
- Keylock for security

196040:
- Size: 5.8"W x 8.5"D x 1.5"H
- Weight: 1.2 lbs.

196031:
- Size: 4.1"W x 7.5"D x 1.6"H
- Weight: 0.8 lbs.

196040

Includes: Inner cable with IDE connector

Part No.	Description	1	10	25
196040	IDE rack w/ insert	$27.95	$20.95	$14.69
196031	Insert for 196040	19.95	17.99	15.99

19" Cable Management Racks

Make your cable looms neat and organized with our 2 unit cable management rack. Simply slip in the cable between spaces and route them to their destinations.

208776

209031

Part No.	Description	1	10
208776	Ducting type cable holder	$21.95	$19.95
209031	C clamp type cable holder	21.95	19.95

Discover More @ www.Jameco.com

More Computer Rack Mount Hardware and Cases on our website. Log on today to see complete listings.

Relay Rack & Rack Panels

Rack:
- Black powder coat finish
- 10-32 threaded holes
- Used with 19" wide panels
- 16 gauge CRS base
- Size: 84"H
- 1/8" aluminum side rails
- Size (at base): 19.8"W x 15.3"D x 84"H

133751

19" Wide Panel:
- 10-gauge black aluminum
- Size: 1.75"H
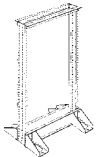
133276

Part No.	Description	Wt. (lbs.)	1	10
133751	Relay rack	21.8	$179.95	$161.95
133276	Rack panel	0.4	9.45	8.49

IDE Removable 5.25" Rack Kit for 3.5" Hard Drive w/ Fan

- Supports DMA 66 hard drive
- Removable storage for 3.5" hard drives
- LED for power and hard drive activity
- Retaining lock mechanism
- 12VDC @ 50mA fan
- CFM rating: 5.6
- Size: 5.9"W x 8.7"D x 1.6"H
- Weight: 1.3 lbs.

Includes: Mounting hardware

Part No.	Description	1	10	25
170608	Rack kit (IDE)	$29.95	$26.95	$23.95

ATX Vertical Computer Enclosures with Power Supply

- Slide-off side panel accesses roomy interior
- One internal 3.5" drive bay
- Back panel supports seven expansion slots
- Three exposed 5.25" and two exposed 3.5" drive bays
- 115V/230V switch
- Size: 8.6"W x 17.8"D x 17.3"H
- Weight: 32.1 lbs.

140038

Includes: Power cord and 8Ω/0.5W speaker

Part No.	Description	Price
140038	250W ATX power supply	$79.95
153066	300W ATX power supply	99.95

We'll Send It Today! Don't worry about back orders.
Over 99% of our products are in stock!

Power Strip Outlet Saver

With our high quality power strip outlet saver, you can use all the outlets on your surge suppressors, UPS, and outlet strips. Just plug a bulky power adapter into this cable and free up your other outlets.

199777

Before
Two Outlets Blocked

After
Every Outlet is Usable

Part No.	Description	Length	Cord Type	1	10	100
199777	AC Power cord (black)	1'	SVT $1.69		$1.55	$1.35
208338	AC Power cord (beige)	1'	SVT 1.69		1.55	1.35

Power Strip Saver Double Outlet

Get full use of your power strips. Plug those bulky adapters into these cables and plug the cables into the power strip. Need the extra adapter to be plugged into the power strip? Use the "Y" power strip saver to add an extra adapter.

Part No.	Description	1	10	100
208346	Power strip saver $2.89		$2.75	$2.59

TRIPP·LITE isobar® Surge Protectors

139686

The world's best known, most advanced surge protectors provide total protection against surges, spikes and line noise.

- Up to $50,000 Ultimate Lifetime Insurance covers Isobar and connected equipment against surge damage for life!
- Diagnostic indicators on Ultra versions alert you to improper outlet wiring, loss of AC power, and damage to protection circuitry
- "Cascade Circuitry" allows you to chose increased noise protection level for your most sensitive equipment   • UL 1449 and 1283 listed   • Lifetime warranty
- IsoTel model has dual RJ11 jacks for complete modem/fax surge protection
- 4-outlet protectors: 6' cord; 8 and 12-outlet protectors: 12' cord

185113

ULTIMATE LIFETIME INSURANCE

MADE IN USA

Isobar Premium 19" Rack Mount Surge Protector

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
139686	IBAR12RM	750	12 outlet, 2 isolated filters	4.7 ...... $99.95		$89.95

Isobar Ultra Premium Surge Protector

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
19001	ISOBAR 8U	2350	8 outlet, 4 isolated filters	3.5 ..... $69.95		$62.95

Isotel AC/Phone Line Surge Protector

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
185113	ISOTEL 4U	2700	4 outlet, 2 isolated filters	2.7 ...... $49.95		$44.95

Power Base Surge Protector

- Maximum surge voltage: 6000V
- 5 switched AC power outlets, 1 unswitched and 2 RJ11 ports
- Max. energy dissipation: 50 joules/MOV, 150 joules

Part No.	Size (W"xD"xH")	Agency	Wt. (lbs.)	1	10
20159	13.9 x 12.7 x 1.7	UL	7.1 .... $14.95		$13.49

POWERWARE   300-VA UPS System

With Dual Outlet

- Protects against blackouts and brownouts
- Battery charging: less than 6 hours to 90% usable capacity
- Battery backup time: 5–10 mins. @ full load; 10–20 mins. with partial load
- Input voltage: 120VAC @ 60Hz
- Output voltage: 120VAC
- Output current: 2.5 amps (full load)
- Size: 3.4"W x 5.8"D x 13.2"H   • Weight: 12.4 lbs.

Part No.	Product No.	Description	1	10
179961	PRB300A	300-VA UPS system $59.95		$53.95

Around-the-Clock Ordering 24 x 7 x 365
www.Jameco.com   1-800-455-6119

CD-ROM, Floppy, Hard Drives and Accessories

1.44MB 3.5" Internal Floppy Disk Drives
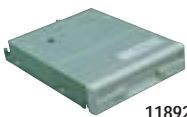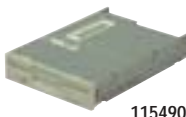
118922   **115490**

- IBM PC/XT and higher compatibles
- Compatible with DOS versions 3.3 or higher
- Determines if disk is high or low density
- Size: 4.0"W x 5.9"D x 1.0"H (actual drive size)

Part No.	Mfr. Cross Ref. No.	Mfr.	Color	1	10
118922	MPF520-1	Sony	Beige .. $24.95		$22.49
115490	FD235	TEAC	Beige ... 21.95		19.95
189000	D35973	Mits.	Black ... 17.95		15.95

3.5" Drive Mounting Kit

- For mounting a 3.5" floppy drive into a 5.25" slot

Includes: Beige faceplate

Part No.	Description	1	10	50
32088	Drive mounting kit $7.69		$6.95	$6.25

iomega 100MB IDE ZIP Drive

- 100MB capacity per disk
- Average seek time: 29ms
- Transfer rate: 1.4MB/sec.
- IDE interface
- Buffer size: 16k
- Fits in standard 3.5" drive bay
- OS: DOS 6.xx, WIN 3X/9X/NTXX

Includes ZIP disk and drivers!

Includes: ZIP disk and ZIP drivers (CD-ROM)

Part No.	Description	1	10
149593	100MB IDE ZIP drive $69.95		$62.96

Internal CD-ROM Drives

- 5.25" half-height design
- One-year warranty
- Manufacturer varies

Includes: Audio cable

* Black faceplate

189819

IDE Drives

Part No.	Speed	Buffer	kB/sec.	Wt. (lbs.)	1	10
149307	24X	256kB	3600	2.6.... $34.95		$32.95
189051	32X	128kB	4800	2.6...... 34.95		31.49
189819	40X*	128kB	6000	2.6...... 34.95		24.49

Internal CD Writer

Floppies and ZIP disks don't have enough space for large audio and video files. Now create music or photo album CDs and back-up with this internal CD-writer that writes up to 650MB on a single CD! Carry all your data with you and use it anywhere.

198782

- 16x high speed for CD-R media, 10x rewrite speed for CD-RW, and 40x for fast reading of data
- Works with many CD formats
- Standard E-IDE/ATAPI interface

Includes: bundled software for archiving and CD creation.

198774: 24x 80 minutes 700MB 50 pack CD-R

Part No.	Description	Wt. (lbs.)	1	5
198782	CD writer	1.3 ..... $49.95		$44.95
198774	50-pack CD-R (700MB)	2.0 ...... 14.95		13.49

Our complete selection is @ www.Jameco.com

Part Number Color Code Legend
Sale Refurbished Closeout

IDE, EIDE & SCSI Hard Drives
PC/XT/AT and Compatibles

- IDE drives over 528MB require EIDE controller or higher
- Manufacturers may vary and capacity may exceed specification; we carry Seagate, Western Digital, IBM and others.
- All are 1" in height

124978

Part No.	Capacity	Description	Conn. Pins	Wt. (lbs.)	Average Access Time (ms)	Warranty	1	10
115764	425MB	3.5" IDE	40	1.7	12.5	3 mos.	$79.95	$71.95
118949	850MB	3.5" IDE	40	1.7	14	1 year	84.95	75.95
124978	1.27GB	3.5" IDE	40	1.1	14	1 year	89.95	80.95
146325	1.7GB	3.5" IDE (Fast ATA-2)	40	1.1	12	1 year	99.95	89.95
146333	2.5GB	3.5" EIDE (Fast ATA-2)	40	1.0	11	1 year	99.95	89.95
151036	3.2GB	3.5" EIDE (Ultra DMA33)	40	1.1	11	1 year ...	114.95	105.95
151044	4.3GB	3.5" EIDE (Ultra DMA33)	40	1.1	11.5	1 year ...	119.95	109.95
151052	6.4GB	3.5" EIDE (Ultra DMA33)	40	1.1	9.5	1 year ...	139.95	125.95
162261	8.45GB	3.5" EIDE (Ultra DMA33)	40	1.2	9.5	1 year ...	139.95	125.95
189085	1.0GB	SCSI	50	1.3	9.6	3 mos.	39.95	35.95

Internal CD-RW/DVD-R Drive

Up until recently, backing up data and playing DVDs required two drives. With this internal CD-RW/DVD-R unit, you can do both. Watch your favorite DVD on your PC or burn-in data, photos, video clips and presentation files into a CD-R of up to 800MB in 7 minutes.

- Standard EIDE/ATAPI interface
- Compatible with Windows® 95/98/2000/ME

Part No.	Description	Wt. (lbs.)	1	5
200643	12x (CD-R) 10x (CD-RW) 32x (CD Read) 8x (DVD read)	2.0	$169.99	$159.99

External SCSI Cables for Complete Connectivity

- For PC/XT/AT and compatibles
- All lines connected

73162 **137568** **SALE**

Part No.	Description	1	10	100
73162	Male 50-pin Centronics to male 50-pin Centronics SCSI-I to SCSI-I (6')[†]	$6.95	$5.19	$3.65
118084	Male 50-pin Centronics to male HPDB50 cable SCSI-I to SCSI-II (6')	14.95	13.49	11.95
137568	Male HPDB68-pin to male HPDB50-pin SCSI-III to SCSI-II (3')	12.95	11.49	9.95

[†] Also Macintosh® compatibles, see above for SCSI type connector guide

ATX Power Supply 15" Extension Cable

- For use with ATX power supplies
- 20-pin ATX male and female connectors
- Color coded to ATX power supply code
- 15"L x 18 AWG (wires)

Part No.	Mfr. Cross Ref. No.	1	10	100
170237	ATX-400-RV	$6.49	$5.85	$5.29

5.25" Disk Drive Power Splitter

- IBM PC/XT and higher compatibles
- Splits 4-line Molex male into 2 females
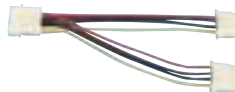
Part No.	Drive	AWG	Length	1	10	100
28353	5.25"	18	5"	$2.95	$2.65	$2.39

Thermoelectric Cooler Chips

- Cools down to -30°C (dependent on external temperature)
- T max. = 60°C
- 20 AWG wire leads, 4" long
- Heat or cool by changing direction of current
- Operating voltage: 15.4VDC nominal

172048

Part Number	Mfr. Cross Ref. No.	Couples*	Watts	Voltage (max.) DC	Current (max.) A	Size (L" x W" x T")	Pricing 1	10
172030	TEC30	71	19.7	8.4	4	1.2 x 1.2 x 0.2	$19.95	$17.95
172048	TEC40	127	35.6	15.4	4	1.6 x 1.6 x 0.2	25.95	22.95
172056	TEC50	127	79.1	15.4	8	2.0 x 2.0 x 0.2	45.95	41.49

* Couples: # of P&N type semiconductor pairs connected electrically in series
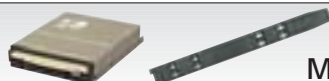
23 More @ www.Jameco.com
More Drives and Accessories on the web.

SCSI TYPE / CONNECTOR REFERENCE TABLE

SCSI type	DB25	50-pin Centronics	50-pin Header	Half pitch DB50	Half pitch DB68	VHD68 Centronics	VHD80 Centronics
SCSI-I		✔	✔	✔			
SCSI-II				✔	✔		
SCSI-II wide						✔	
SCSI-III						✔	✔
RAID: SCA, SCA-2							✔

Computer Card Brackets

Fig.: 1 2 3 4 5 6

- For securing cards into bus slots
- Fits standard PC/XT/AT cases   • Length: 4.75"
- See pg 30 for DB connectors

Part No.	Description	Fig.	1	10	100
11754	Blank back panel	1	$1.79	$1.65	$1.45
139424*	Blank w/ board mt.	2	1.69	1.45	.85
101717	For DB9 connector	3	1.25	1.15	1.05
101733	For DB25 connector	4	1.25	1.15	1.05
101741	For DC37 connector	5	1.25	1.15	.94
101830	For DB9/DB25 conn.	6	1.99	1.79	1.59

* 1.0" top end to first tab (center hole) – 2.5" tab to tab (center hole)

CD Cases
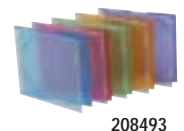
208485 **208493**

Part No.	Description	1	10	100
208485	Slim black 10 pk.	$3.99	$3.59	$3.19
208493	Slim asst. color 10 pk.	4.95	4.45	3.95

Back Panel PC Cooling Fan

- Type: sleeve axial fan
- Back panel mountable
- Operating volt.: 12VDC @ 140mA
- Airflow: 43 CFM
- Noise ratio: 26dBA
- Power: 1.7W
- 10.5" wire with 4-pin Molex power connector
- Size: 4.3"L x 3.5"H x 1.1"Thick
- One-year warranty

Part No.	Description	1	10	50
152240	PC cooler fan	$19.95	$17.95	$15.95

Thermoelectric Cooler with Heat Sink

- Heat or cool by changing direction of current
- Cools down 45°F
- Max. heat sink operating temp: 100°C
- Operating voltage: 13-15VDC @ 4A (nominal)
- Rated lifetime over 200,000 hrs.
- 18 (AWG) wire leads, 3.0" length
- Size: heat sink: 5.0"L x 4.0"W x 1.4"H; pump: 6.0"L x 4.8"W x 0.7"H
- Weight: 2.4 lbs.
- **Removed from original equipment**

Part No.	Description	1	10
147942	Thermoelectric cooler	$29.95	$26.95

CPU Heat Sinks and Fans

151298   196242   181278   195784   196074   118092

- Excellent for avoiding CPU overheating during extended system on-time
- High efficiency cooling fans   • Easy installation – just snap it in

Part No.	Description	Size (H" x W" x D")	Agency Approvals	1	10	50	100
151298	Heat sink w/ fan for slot 1 (SECC 1)	4.90 x 2.15 x 1.34	UL/CE/TUV	$10.95	$9.89	$8.89	$6.95
196242	Heat sink w/ fan for socket 7 (ATX)	2.26 x 2.12 x 1.07	UL/CE/TUV	9.95	8.95	7.95	6.95
181278	Heat sink w/ fan for socket 7 (ATX)	2.12 x 2.05 x 1.67	UL/CE/CSA	9.95	8.95	7.95	6.95
195784	Heat sink w/ fan for socket 7 (AT/ATX)	2.12 x 2.13 x 1.52	—	9.95	8.95	7.95	7.95
196074	Heat sink w/ fan for socket 7 (AT)	2.40 x 2.26 x 1.08	UL/CE/TUV	9.95	8.95	9.95	8.95
118092	Heat sink w/ fan for 586 CPU w/ snap	2.18 x 2.30 x 1.00	UL/CE/TUV	4.95	3.69	3.49	2.59

DIMM and SIMM Memory

148398   **148443**

Part Number	Mfr. Cross Ref. No.	Pins	Description		1	10
148398	4MBX64SDRAM	168	4M x 64	10ns Syn. DRAM DIMM (32MB)	$16.95	$15.95
148401	8MBX64SDRAM	168	8M x 64	10ns Syn. DRAM DIMM (64MB)	32.95	29.95
148419	16MBX64SDRAM	168	16M x 64	10ns Syn. DRAM DIMM (128MB)	59.49	59.49
130729	JEEDO7208	72	2M x 32	60ns SIMM EDO module (8MB)	12.95	11.69
130711	JEEDO7216	72	4M x 32	60ns SIMM EDO module (16MB)	19.95	17.95
148443	JEEDO7232	72	8M x 32	60ns SIMM EDO module (32MB)	43.95	39.59
148451	JEED07264	72	16M x 32	60ns SIMM EDO module (64MB)	29.95	28.45
75184	P364000-XX-6	72	4M x 36	60ns SIMM module (16MB)	49.95	44.95
75168	P364000-XX-7	72	4M x 36	70ns SIMM module (16MB)	45.95	41.49
148460	8MBX36-60	72	8M x 36	60ns SIMM module (32MB)	87.95	79.19
53701	94000S-70	30	4M x 9	70ns SIMM module (9 chips)	11.95	10.95

Pentium II Class Motherboards

- ATX motherboards are compatible with Intel® Pentium II Processors

SALE

188091

185367

Part No.	188091	185367
Processor	Slot 1*	Slot 1
Speed	233-333 MHz	233-333 MHz
Chip set	440LX	440LX
BIOS	Award	Award
Memory	EDO (168 pin)	EDO (168 pin)
Capacity	768MB	384MB
Slots	3	3
Speed	66 MHz	66 MHz
Slots		
PCI	4	4
AGP	1	1
ISA	3	3
Interfaces		
Hard Drive	4 EIDE	4 EIDE
Floppy	2	2
USB	2	2
Parallel	1	1
Serial	2	2
IrDA	None	None
Sound	None	None
Keyboard	PS/2	PS/2
Video	None	None
Size	12" x 7.5"	12" x 7.4"
Weight	2.5 lbs.	2.5 lbs.
Price 1	$39.95	$34.95
Price 10	$34.95	$24.49

* Also supports the Intel Celeron™ processor

ISA 16-Bit Super VGA Card

512KB on Board

- 1024 x 768 resolution in non-interlaced and interlaced modes
- Supports 16 colors; requires 1MB video RAM
- Supports VESA standard graphics & text modes
- Output HDDB15 female (analog)
- Emulates VGA, EGA, CGA, MDA & Hercules modes
- One-year warranty

Requirements: IBM AT and higher compatibles

Includes: 512kB video RAM, expandable to 1MB by adding one P/N 128688 chips, pg 4; software and manual

Part No.	Description	1	10	25
104660	VGA card	$49.95	$44.95	$39.95

VESA 24-Bit Graphics Accelerator Card

1MB on Board

Increases the speed of graphics and windowing programs by up to 15 times that of standard VGA.   **SALE**

- Provides 24-bit true color at 640 x 480 pixels, 16M colors
- Connector: HDDB15 female
- On board memory: 1MB, expandable to 2MB using 256k x 16 DRAM P/N 128688, pg 4
- Non-interlaced/interlaced modes supported
- Weight: 0.7 lbs.
- One-year warranty

Requirements: Intel® 486 & higher compatibles

Part No.	Description	1	10
137285	Graphics accelerator	$35.95	$32.35

PCI 24-Bit SVGA Graphics Card

4MB on Board

- SIS 6326 AGP chipset
- Best support for DVD and MPEG-II playback
- 24-bit color @ 800 x 600 resolution
- Refresh rate: 60-75Hz
- HDDB15 female connector
- Size: 5.3"L x 3.5"W

Requirements: Windows® 3.x/95/98/NT4.0

Includes: Manual and CD-ROM drivers

Part No.	Description	1	10
167476	PCI accelerator card	$39.95	$35.95

Jameco's Low-Price Guarantee

We'll match the advertised price of any like product.

It's that simple!

QTRONIX. Win 95 104-Key Keyboard with Jumbo Trackball

- PC/AT and PS/2 compatible w/ DOS 3.0 or higher
- "N-Key" roll-over for quick typists
- Tactile click sound and feel • Weight: 3.7 lbs.
- Size: 19.0"L x 6.8"W x 1.4"H • One-year warranty

Includes: Software and AT cable adapter

Part No.	Description	1	10	25
128717	Scorpius 35PM/NET	$99.95	$90.95	$84.95

COMPAQ 101-Key Keyboard

- For PS/2 systems
- Tactile touch
- LED indicators for Num, Caps, and Scroll lock
- 12 function keys with separate cursor and numeric keys
- Recommend using adapter P/N 85500 or P/N 159089, pg 50
- Size: 18.3"L x 6.5"W x 1.3"H • Weight: 3.6 lbs.

SALE

Part No.	Description	1	10	25
191530	101-Key Keyboard	$19.95	$14.95	$10.95

QTRONIX. 22-Key Serial Keypad

- Tactile click-sound and touch
- Auto repeat function
- 9600 bps, data bits: 8, stop bits: 1, start bit: none, no parity
- Serial DB9 connector
- 2-key rollover
- Color: beige
- One-year warranty
- Size: 6.2"L x 4.2"W x 1.3"H
- Weight: 0.8 lbs.

System requirements: IBM PC/XT or higher compatibles; and MS DOS 3.X

Includes: 3.5" driver diskette and manual

Part No.	Description	1	10	25
129357	Scorpius 22RW	$39.95	$35.95	$32.49

QTRONIX. 17-Key PS/2 Keypad

A compact keypad designed for use with IBM compatible laptops and desktop PC.

- Auto-repeat function
- Tactile click-sound and touch
- Switch life of 20 million cycles
- For IBM PS/2 and compatibles
- Two key roll over
- Installs into 6-pin mini DIN keyboard connector (no software required)
- One-year warranty
- Size: 5.6"L x 3.4"W x 0.9"D

Part No.	Description	1	10	25
151811	Scorpius 20PB	$34.95	$31.49	$27.95

30-Day Money Back Guarantee

QTRONIX. PS/2 3-Button Optical Wheel Mouse

- Ergonomic style 3-button optical wheel mouse
- High tech optical sensor for all surface types
- Size: 3.9"L x 2.3"W x 1.5"H

System requirements: IBM PC or compatible, Windows® 98/2000/ME, available PS/2 port

Part No.	Description	1	10	25
199591	Optical wheel	$29.95	$26.95	$24.25

QTRONIX. Trackball with Menu Software

- Over 24 software menus to ease use
- Variable resolution (20-6400 dpi)
- Convenient button lock for dragging & drawing
- Ergonomic design
- 3.5" disk • One-year warranty
- Size: 5.5"L x 4.6"W x 2.0"H

System requirements: IBM PC/XT or compatible systems; MS DOS 3.3 or later, Windows® 95

Part No.	Description	1	10	25
128995	LIBRA 90 MP PRO	$29.95	$26.95	$24.25

ATEN K/V/M Switch Boxes for up to 4 Computers

- Selects any computer by hot keys or switch
- Serial mouse, PS/2 mouse & keyboard emulation for automatic PC boot up
- Three stage cascadable for accessing more computers
- Supports SVGA, VGA and Multisync monitors
- Keyboard LED status recorded and restored while switching among computers
- Auto scan for monitoring PC periodically

Includes: Manual & power supply (9VDC @ 600mA)

149382 (front)

149382 (rear)
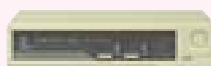
Part No.	Description	Wt. (lbs.)	1	10
149382	2 computers	4.0	$149.95	$129.95
149391	4 computers	7.1	229.95	209.95

Audio/Video Adapters (CAT 5 UTP)

- Designed to convert impedance of video/audio signals to 100Ω for transmission over CAT 5 UTP cable
- Supports both NTSC or PAL video signals
- Built-in impedance matching device and filter for video and audio signal transmission
- Use with existing premises wiring and wall jacks for easy and cost effective installation
- Transmission distance: 1000' color video, 2000' for B/W video

195750 (label)

195750:
- Signal pair: video (BNC), CAT pair 1 (RJ45)

Includes: RJ45 to wire terminal block adapter

155002:
- Signal pairs: video (BNC), CAT pair 4 (RJ45); audio 1 (RCA), CAT pair 3 (RJ45); audio 2 (RCA), CAT pair 2 (RJ45)

Includes: 1 RCA to BNC adapter & 2 mounting screws

Part No.	Connector Type	1	10
195750	BNC/RJ45	$29.95	$26.95
155002	BNC/RCA/RJ45	42.95	38.95

AverKey Pro PC to TV Converter Box

- Converts VGA video or Macintosh® 640 x 480 to standard NTSC
- Built-in flicker filter
- Resolution: 800 x 600
- TV brightness control
- Compatible w/ Microsoft® Windows® 3.0 and higher
- Size: 6.0"L x 4.0"W x 1.0"H
- Weight: 2.2 lbs.

System requirements: VGA-based PC, DOS 3.0 or higher, 640kB RAM or larger

Includes: Compact PC to video converter box, transformer, utilities diskette, cables and manual

Part No.	Description	1	10
167193	Video signal pro	$109.95	$99.95

SMK RF Modulator

- Output frequency: NTSC Ch. 3/4, switch selectable
- 12VDC RF modulator
- Operating voltage: 12V@ 50mA max.
- RF output impedance: 75Ω (F-type connector)
- Video modulation: 1.0V p-p
- Audio FM deviation: 1.4V p-p
- PC connections: solder tab connectors
- Size: 1.7"L x 1.7"W x 0.7"H • MFG. #: WMN2144-01

SALE

Part No.	Description	1	10	50	100
141639	RF modulator	$4.95	$3.95	$2.95	$2.10

480-Watt Multimedia Amplified Speakers

- Input voltage: 120VAC
- 2 speakers
- Magnetically shielded
- 2-channel stereo amplifier
- Push button type power switch with LED indicator
- Knob controls for volume, bass & treble
- Size: 5.5"W x 7.0"D x 9.1"H • Weight: 5.3 lbs.

Part No.	Description	1	10
196066	480W speakers	$39.95	$35.95

Desktop Microphone

- Connector: 3.5mm male stereo plug
- Neck length: 17.5"
- Cord length: 5.5'
- One-year warranty

SALE

Part No.	Description	1	10	25
129963	Desktop microphone	$4.22	$3.80	$3.42

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A larger selection of Keyboards and Mice on our website.

USB WEBCAM Video Camera
With Motion Detection Software
- Create video images and send via email
- Capture still photos using motion detection software
- USB-A male interface
- Compatible with Windows® 98/ME/2000
- CMOS sensor • Image res.: 352 x 288 pixels
- Up to 30 frames per second • Manual focus lens
- Size: 2.3" diameter • Weight: 1.0 lb.

DEXXA

System requirements: IBM PC with Pentium® 233MHz or higher compatible, Windows® 98/ME/2000, CD-ROM, available USB port

Includes: Mounting base, installation guide, CD-ROM drivers and software

Part No.	Description	1	10
191775	USB WEBCAM	$24.95	$22.45

USB PenCam Digital Camera
Still and Streaming Video Capable
- USB Interface
- Compatible with Windows® 98/2000 and ME
- High resolution 352 x 288 (20 still shots)
- Low resolution 176 x 144 (80 still shots) • 10-second self timer
- Up to 12 seconds of AVI streaming video
- Up to 2-hour battery life (full-time usage)
- Size: 4.8"L x 1.3"W x 0.8"D • One-year warranty

SALE

Requires: 2 AAA batteries not included (recommend P/N 185279, see website)

Includes: CD-ROM software bundle with Pocket Cam Manager, Photo Express 3.0, Photo Explorer 3.0, COOL 360 1.0, Video Live Mail Plus 3.11b, and Microsoft Net Meeting 5.0; 5' USB cable; camera stand and camera clip

Part No.	Description	1	10
177199	Digital PenCam	$62.95	$56.65

14" SVGA Color Monitor
- 13" diagonal view
- 0.28mm dot pitch
- HDDB15 male connector
- Power, contrast, brightness, horizontal and vertical position, recall and trapezoid knob adjustments
- Resolution: 1280 x 1024 @ 60Hz
- Input voltage: 100-240VAC @ 50-60Hz
- Size: 14.2"W x 14.6"D x 13.5"H • Weight: 25 lbs.
- Refurbished (mfr. may vary)

Requirements: IBM PC/XT or higher compatible

Includes: Power cable, tilt and swivel base

Part No.	Description	1	10
174537	13" diagonal view	$69.99	$64.99

4" TFT LCD Monitor
NTSC Format
- TFT color LCD
- Resolution 234 x 383 dpi
- Backlight: cold cathode fluorescent lamp • Pwr. source: 12VDC @ 400mA
- 5" lead wire w/ 4 position molex type pwr. conn.
- Tint color and brightness adjustable
- Size: 4.1"L x 3.3"W x 0.7"H (display)
- Size: 4.7"L x 3.3"W x 1.3"H (unit) • Weight: 0.7 lbs.

Part No.	Description	1	10
172742	4" color LCD monitor	$159.95	$149.95

Color Camera Board
NTSC Format
- 1/3" CCD image sensor
- 330 TV lines • 5.0 lux
- FOV: 92˚ • 3.6mm lens/F2.0
- Low power consumption
- Automatic exposure, gain and white balance

Part No.	Description	1	10
171011	Camera board	$69.95	$62.99

Black & White Camera
EIA Format
- 1/3" CCD image sensor
- 510(H) x 492(V)
- Horizontal resolution: >350 lines
- Scanning system: 2:1 interlace
- Sensitivity: 0.7 lux/F2.0 • S/N ratio: 46dB
- Video output: 1Vp-p, composite video 75Ω
- Pwr. supply: 12VDC (recommend P/N 162996, website)
- Power consumption: 110mA • FOV: 92˚
- Electronic shutter: 1/125,000 sec. (linear)

Part No.	Description	1	10
171029	Camera board	$47.95	$42.95

Color Interline Camera
- EIA format
- 1/3" CMOS image sensor
- EIA format: 512(H) x 492(V)
- 330 horizontal line resolution
- 2:1 scanning interlace system
- 5 lux sensitivity • FOV: 530
- Video output: 1V p-p; 75Ω
- 6mm lens/F2.0 • S/N ratio: 40dB
- Electronic shutter: 1/60 – 1/1,200 sec.
- Water resistant with adjustable mounting bracket
- Connectors: 1 standard RCA female jack for video, and in-line 2.1mm power-plug connector for power supply • Size: 2.6"L x 0.9"Dia.

Requires: 12VDC @ 40mA center positive power supply (recommend P/N 162996, see website)

Part No.	Description	1	10
185017	Color camera	$99.95	$89.95

Color Camera
- 1/3" Panasonic CCD image sensor
- Image size: 4.82mm (H) x 3.64mm (V)
- More than 380TV lines horizontal resolution
- 15.734kHz synchronous frequency
- Scanning system: 2:1 interlace
- S/N ratio: more than 46dB • FOV: 42.6˚
- BNC connector for video • 1.0 lux / F1.4
- Video output: 1Vp-p; 75Ω
- 512(H) x 492(V) NTSC signal format
- Auto iris: DC driver / video driver switchable
- Size: 4.0"L x 2.2"W x 2.0"H • Weight: 0.9 lbs.

Requires: 12VDC @ 140mA power supply (recommend P/N 162996, see website)

Part No.	Description	1	10
171248	Color CCD camera	$224.95	$201.95

2.4GHz Wireless Color CCD Camera
With AES/AI Video Drive
- 1/3" CCD interline sensor
- 380 TV line resolution
- 512(H) x 492(V)
- Scanning system: 2:1 interlace
- Auto electronic shutter (AES): 1 to 1/100,000 sec
- Auto iris (AI) control video drive switchable
- S/N ratio: more than 48dB
- Video output: 1Vp-p/75Ω
- Impedance output: 75Ω typical
- LED power "ON" indicator at rear panel
- Size: 4.0"L x 2.2"W x 2.0"H
- Color; NTSC format; 2.0 lux/F1.2

SALE

174810: Lens not Included

208645

Includes: 15VDC power supply, antenna, mounting bracket and manual

208645: • Aperture: ±4F=1.4~64
- Auto Iris direct drive • FOV: 46°

Part No.	Description	1	10
174810	Color camera	$264.95	$234.95
208645	Auto Iris lens	69.95	62.95

4-Channel 2.4GHz Wireless Audio/Video Transmitter System
CCIR, NTSC, PAL, EIA Format
- ISM band: 2.4–2.483GHz
- Four selectable channel transmitter and receiver
- Audio response: 20Hz–20kHz
- Antenna mode: dipole (omnidirectional)
- Video output: 1V p-p/75Ω composite video
- RCA jacks for audio/video connectors

Includes: Two 12VDC @ 500mA w/ 2.1mm x 5.5mm center positive plug, and patch cables
Transmitter: Size: 3.5"L x 2.5"W x 1.1"H
Receiver: Size: 5.1"L x 4.0"W x 1.0"H

Part No.	Description	1	10
169631	4-ch. wireless system	$151.95	$134.95

2.4GHz Wireless Antenna Booster
Extend Video Transmitting Distance
- Output power: 800mW
- Audio/Video booster
- FM design
- Impedance output: 50Ω typical (to antenna)
- Video output: 1Vp-p composite video; 75Ω (to camera)

174748

Includes: Wall transformer, adapter & mounting hdwr.

Part No.	Description	1	10
174748	Antenna booster	$199.95	$179.95
179872	Wireless extension cable	10.99	9.89

Video Text Display Module
NTSC composite (1Vp-p, 75Ω)
- Serial data input: 2400-19.2kbps • 30-pin SIMM form factor (socket supplied)
- Compatible w/ Parallax Basic Stamp®, see pg 60
- Auto-switching genlock overlay or internal video generation
- Power supply: +8-16VDC @ 65mA input, 5VDC aux. output (regulated)
- Displays up to 308 characters (11 lines of 28) • Asynchronous serial input only @ 9600bps

Part No.	Mfr. Cross Ref. No.	Character Pattern	Size	1	10	25
162051	BOBII	12 x 18 pixels	3.5"L x 1.1"H	$79.95	$71.95	$63.95

JAMECO

Easy PIC'n

Beginner Level PIC Applications

Square 1 Publishing Learn about the PIC16C54 & PIC16C84 and apply to the whole line of microcontrollers. This easy-to-use guide teaches assemblers, programming, interrupts, timing/ counting and I/O conversion. (160 pages, 1999)

Part No.	Description	1	10
136645	Easy PIC'n	$29.95	$26.95

PIC'n up the Pace

Second in the PIC Series

Square 1 Publishing The next book from where Easy PIC'n left off. Includes topics on Op Amps, shift registers, liquid crystal display interface, digital to analog conversions, analog to digital conversions and decimal interface. (269 pages, 1999)

Part No.	Description	1	10
145736	PIC'n up the Pace	$34.95	$31.49

PIC'n Techniques

Intermediate Level PIC Applications

Square 1 Publishing Describes the unique advanced features of the 8-pin microcontrollers; the use of timers 1 and 2; capture/compare module; followed by timing, counting, pulse width modulation and datalogging. (311 pages, 1999)

Part No.	Description	1	10
161242	PIC'n Techniques	$34.95	$31.49

Programming & Customizing PICmicro Microcontrollers

Second Edition

McGraw-Hill Details the features of the PICmicro® and how to use these embedded chips to access and control many different devices. Shows what happens within the PICmicro® when an instruction is executed and how it interfaces with external devices.(1190 pages, 2001)

Includes: CD-ROM and PIC PCB

Part No.	Description	1	10
183046	PICmicro Programming	$49.95	$44.95

The Microcontroller Application Cookbook - Volume 2

Woodglen Press - Building on the foundations laid on the first volume, this volume contains schematics with complete part numbers as well as sample "code snippets" that demonstrates how each circuit works. This book focuses on the actual circuits and specific components, leaving the theory process behind and provides you the practical creation of a working circuit. The author has acknowledged Jameco Electronics for providing the components necessary in creating the circuits. (248 pages, 2002)

• Size: 5.3" x 8.3" • Weight: 0.6 lbs.

Part No.	Description	1	10
212847	Microcontroller Cookbook Vol 2	$29.95	$27.95
181681	Microcontroller Cookbook Vol 1...	$29.95	$27.95

BASIC Stamp Data Book

Newnes Publishing Covers both the hardware and software of the Parallax BASIC stamp I and II microprocessor operation and design. The basic stamp is built on PC microcontroller hardware and uses PBASIC as its programming language which makes it simple to use and modify for beginners and professionals. (305 pages, 2000)

Part No.	Description	1	10
143651	Basic Stamp Data Book	$34.95	$31.49

PIC Microcontroller Project Book

Comprehensive Beginner's Guide

McGraw-Hill Provides you with hands-on directions for putting Microchip's RISC-based chips with up to 8k of memory to work. Starting with simple projects and experiments, this book leads you gradually into sophisticated programming techniques. Provides you guidance on getting the equipment you need and programming your chip. (203 pages, 2000)

Part No.	Description	1	10
174650	PIC Beginner's Guide	$29.95	$26.95

Electric Motors and Control Techniques

TAB Publishing

Explains how different types of motors operate, and how electronic control devices can be used to improve efficiency in a wide range of applications. (294 pages, 1994)

Part No.	Description	1	10
137162	Electric Motors & Control........	$24.95	$22.49

Robot Builder's Bonanza

TAB Publishing

This fascinating guide offers you a complete, unique collection of tested and proven project modules that you can mix and match to create an almost endless variety of highly intelligent and workable robot creatures. (753 pages, 2001)

Part No.	Description	1	10
137171	Robot Builder's Bonanza	$23.95	$21.45

Serial Port Complete

Lakeview Research

RS-232 and RS-485 are the most versatile, inexpensive interfaces for linking, but the hardware and programming are often misunderstood. This book provides you with everything you need to design, program, install and troubleshoot the links you set up. (306 pages, 1998)

Includes: 3.5" diskette

Part No.	Description	1	10
154771	Serial Port Complete	$39.95	$35.95

Everything You Need To Develop Custom USB Peripherals Book

Lakeview (2nd Edition)
This USB Complete book provides an easy-to-use interface for computer peripherals. The book covers topics such as what USB can do, transfer types, chip choices, what's inside a USB controller, writing firmware, how the host communicates and more. (523 pages, 1999)

Part No.	Description	1	10
171900	Complete USB Book	$49.95	$44.95

Programming and Customizing 8051 Microcontrollers

McGraw-Hill Provides you with a complete understanding of the 8051 chip compatibles along with all the information needed to design and debug applications and control many different devices. Includes over 30 experiments, 12 projects and CD-ROM featuring source code and PDF data sheets. (541 pages, 1999)

Part No.	Description	1	10
161402	Program/Customizing	$34.95	$31.49

Oscilloscope Guide Book

Prompt Publishing This book's full illustrations and diagrams bring oscilloscopes to life. Learn how to use them to conduct many tests and measurement techniques. This book answers questions about various types of oscilloscopes and how to obtain useful test results. (214 pages, 2001)

Part No.	Description	1	10
185404	Oscilloscope Guide Book	$39.95	$35.95

TTL Logic Data Book

Texas Instruments Contains specifications and technical information on a broad line of TTL integrated circuits including Schottky TTL circuits. (1240 pages, 1988)

Part No.	Description	1	10
88225	TTL Logic Data Book	$34.95	$31.49
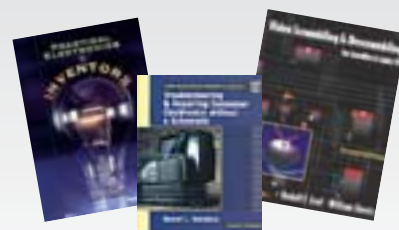
Long-Lasting NiMH Batteries and Chargers

Free Batteries Included

185308   185295

Lasts 10-30 times longer than Rechargeable Alkaline!

Now you can reuse longer-lasting, money saving NiMH rechargeable batteries instead!

NiMH Batteries

Part No.	Description	1	10	25	100
185261	4x AA, 1600mAh ...	$13.95	$12.49	$11.25	$9.95
197000	2x C, 2300mAh	9.95	8.95	8.15	7.29
196998	2x D, 2300mAh	9.95	8.95	8.15	7.29
197018	1x 7.5V, 150mAh	9.95	8.95	8.15	7.29

NiMH Chargers

Part No.	Description	1	10	25	100
185308	AA charger (4 free)	$21.95	$19.95	$17.95	$15.95
185295	Universal charger......	21.95	19.95	17.95	15.95

Replacement Battery

- Lithium half AA
- Amps: .85A-h
- Voltage: 3.6V (Tadiran)
- Diameter: .579"

Part No.	Description	1	10	25	100
126754	Lithium half AA	$7.95	$6.95	$6.25	$5.59

Lithium, Zinc Chloride and Alkaline Batteries

Applications: personal computers, workstations, test equipment, feature telephones, copiers, fax machines, video scramblers/descramblers and remotes.

151095   198791   33398

Part Number	Mfr. Cross Ref. No.	Description (V/Amp-hours/Dia.)	Battery Type	Terminals/Connection	Pricing 1	10	25	100
151095	GF6F22	9.0V/0.3A-h/1.0"L	Zinc chloride	Standard 9V	$1.25	$.99	$.79	$.65
198791	MN1604	9.0V/.5A-h	Alkaline	9V	2.59	2.35	2.15	1.85
126754	TL5101S	3.6V/.85A-h/.579"	Lithium	Half AA (Macintosh®)	7.95	6.95	6.25	5.59
33398	TL5104P	3.6V/1.9A-h/.579"	Lithium	Barrel w/ lead (clock/memory)	7.95	6.95	6.25	5.59
33427	TL5242W	3.6V/1.9A-h	Lithium	Battery pack w/ plug (PC) SALE	9.95	8.95	7.15	5.39
14162	CR2032	3V/180mA-h/.787"	Lithium	Coin cell (clock/memory)	1.25	1.00	.75	.53

TEMPEST Lead Acid Batteries

- .187" color-coded terminals (except P/N 159679 – .470")
- Sealed
- UL approved
- Rechargeable
- Two-year warranty

Tempest is an ISO-9001 Certified Company

155328   155336   159679

Part Number	Product Number	Nom. Volt.	Amp-Hrs.	Charging Voltage Standby	Cyclic	Cross Reference Panasonic	YUASA	Eagle Picher	Size L" x W" x H"	Wt. (lbs.)	Pricing 1	10
155328	TR4-6	6	4A-h	6.75-6.9	7.2-7.5	LCR6VP	NP4-6	CF16V4	2.8 x 1.9 x 4.0	1.8	$10.49	$9.25
159661	TR2.3-12	12	2.3A-h	13.5-13.8	14.4-15	LCR12V2.2P	NP2.3-12	CF12V1.5	7.0 x 1.3 x 2.3	1.9	14.95	13.49
155336	TR4-12	12	4A-h	13.5-13.8	14.4-15	LCR12V4PF	NP412	CF12V4	3.6 x 2.8 x 4.0	3.4	17.95	16.19
155344	TR7-12	12	7A-h	13.5-13.8	14.4-15	LCR12V7.2BP	NP712	CFM12V65	6.0 x 2.6 x 4.0	5.9	17.95	15.95
168188	TR12-12	12	12A-h	13.5-13.8	14.4-15	PS12120	—	CFM12V12	5.9 x 3.8 x 3.8	9.0	30.95	26.95
159679*	TR18-12	12	18A-h	13.5-13.8	14.4-15	LCR12V17BP	NPG18-12	CF12V18	7.1 x 3.0 x 6.6	13.8	34.95	29.95

*159679: Bolt terminals w/ bolt & nut set

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Jameco offers a large selection of Batteries.
See our website for complete listings.

KIT ASSEMBLY EXPERIENCE LEVEL: ⬤ = Beginner   ■ = Intermediate   ▲ = Expert

Kits and Lasers

1 Second to 3 Minute Timer Module

By operating a button, the relay will be activated for the selected time.

CEBEK

- Output contact rating: 5A @ 200VAC
- Size: 3.0"L x 1.7"W x 1.2"H

Requires: Power supply 12V @ 50mA (recommend P/N 100095, see website)

Part No.	Description	1	10	25
147871	I-1 timer	$19.95	$17.95	$15.95

Computer Control Interface Kit ▲ *301-piece kit*

Connects to printer port without interruption of the printer. Works in control applications such as the infrared transit/receiver (P/Ns 120555 and 120547, pg 63).

- 16 I/Os with opto coupler
- Analog outputs: eight 6-bit (64 steps), one 8-bit (256 steps)
- Analog inputs: four 8-bit (256 steps)   • Full opto-isolation with computer
- 3.5" driver disk w/ routines in C++, QBASIC, Turbo Pascal

Requires: DB25 cable (P/N 65787, pg 50)

velleman

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
128928	K8000	9.3"L x 5.3"W	1.7	$139.95	$125.95

velleman Universal Relay Card Kit ▲ *64-piece kit*

An electronic controller that switches higher currents while providing insulation between the controller and the controlled devices.

128910

- Relay Output: Maximum 5A/220VAC   • TTL or CMOS inputs
- Contact Voltage: 12VDC/250mA

Requires: 220 or 125VAC power source

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
128910	K6714	8.3"L x 5.9"W	1.8	$67.95	$61.95
144186	VR15M121C relay (JZC-22F)		0.028	3.25	2.92

Glass-Lens Red Laser Diode and Line Generator

133292: Laser Diode

- Operating voltage: 4.0–6.0VDC (recommend P/N 112070, see website)
- Beam size at 7m: oval – 5mm x 8mm
- Wavelength: 660nm   • Max. output: 4mW
- Beam divergence: 0.2mrad   • Green LED indicator

134148   133292

Class IIIa Laser Product

134148: 60° Line Generating Lens

- Adjustable focus range: 50 cm to ∞   • Lens construction: 3E.3G (glass)
- Back focal length: 1.5mm   • Focal length: 8.0mm   • Fan angle: 60°
- Beam divergence: 2.0mrad   • Length at 1 meter dist.: 1.70 m

Part No.	Description	1	10	25
133292	Glass laser diode	$44.95	$39.95	$35.95
134148	60° lens	12.95	11.49	9.95

Laser Diode Module

Class IIIa Laser Product

- Operates on 3VDC @ <5mW
- 670nm wavelength   • Beam diameter: 3.2mm
- Working distance: over 50 meters/yards (daylight), 200 meters/yards (dark)   • Size: 0.9"L x 0.3"Dia.

Part No.	Description	1	10	25
131203	Laser module, brass	$44.95	$40.49	$36.45

Laser Diode and Driver

182932: Laser Diode   **Class IIIa Laser Product**

- Optical output power: ≤5mW maximum
- Operating current: 30mA   • 5.6mm pkg size
- Operating voltage: 2.6V maximum   • Lasting wavelength: 650nm typical
- Beam divergence of 11 degrees from center line maximum

182932   161736

161736: Laser driver w/ regulator   • Input voltage: 2.6-6VDC   • Input current: 40mA

Part No.	Description	1	10	25
182932	650nm laser diode	$19.95	$17.95	$15.95
161736	Laser driver	7.95	6.95	6.25

Part Number Color Code Legend: Sale   Refurbished   Closeout

BASIC Stamps

127693
130892

BASIC Stamps are small computers using a variation of BASIC to control execution of many applications. The BS1-IC has 8 I/O lines, while the BS2-IC has 16 I/O lines which can be connected directly to buttons, LEDs, registers, and many other TTL level devices. Each allows you to store data in the EEPROM before downloading a BASIC program.

Specifications:	127693	130892
EEPROM	256 bytes	2048 bytes
RAM	16 bytes	32 bytes
Cur. Draw @ 5V	2mA run/20µA	8mA run/100µA
Microcontroller	PIC16C56	PIC16C57
Program speed	2000/sec.	4000/sec.
# of I / O Pins	8	16 + 2 serial
Package	14-pin SIP	24-pin DIP

140071: BASIC Stamp®2 Starter Kit w/ BS2-IC (27203)
Includes the super carrier board, software, manual and programming cable. BASIC Stamp 2 can be connected directly to buttons, LEDs, registers and many other TTL devices.

140071

Part No.	Parallax No.	Wt. (lbs.)	1	10
127693	BS1-IC	0.01	$33.95	$32.29
130892	BS2-IC	0.01	48.95	43.95
140071	27203 Kit	1.9	147.95	132.95

50MHz BASIC Stamp 2SX Module

High-speed version of BS2-IC with additional RAM and EEPROM.

- Microcontroller: Ubicom SX28AC
- Program execution speed: 10,000 instructions/sec. • Volts required: 5-12 VDC
- EEPROM program size: 8 x 2k bytes, 4,000 instructions • Scratch pad RAM: 64 bytes
- Current draw @ 5V: 60mA run/200µA sleep
- Number of I/O pins: 16 + 2 serial
- RAM size: 32 bytes • Size: 1.2"L x 0.6"W

Part No.	Parallax No.	1	10	50
159775	BS2SX-IC 24-pin	$58.95	$55.95	$53.19

BASIC Stamp 2P Modules

In addition to the BS2-SX (above) features, includes new commands for HD44780 compatible LCDs, Dallas Semiconductor 1-wire and Philips I2C parts.

184911

- Program execution speed: 12,000 instructions/sec.
- RAM size: 38 bytes
- Scratch pad RAM: 128 bytes
- Program size: 8 x 2k bytes, 4,000 instructions

184920

- Current draw @ 5V: 40mA run; 400µA sleep
184911: • Number of I/O pins: 16 + 2 serial
184920: • Number of I/O pins: 32 + 2 serial

Part No.	Parallax No.	1	10
184911	BS2P24-IC 24-pin	$78.95	$71.95
184920	BS2P40-IC 40-pin	98.95	89.95

Visit www.Jameco.com/Kits for our complete selection of kits.

Stamp Works Kit

This all-in-one kit takes you beyond theory, into a well-written collection of 32 experiments that will teach you first class BASIC Stamp programming. You'll learn to get the most out of the BASIC Stamp and to increase its versatility by connecting to popular active and passive components.

Part No.	Parallax No.	1	10
184946	27297	$348.95	$314.95

BASIC Stamp Prototyping Boards

Optional boards for BS1-IC, BS2-IC and BS2SX-IC Stamps.

- Easy use of Stamp with prototyping area, 9-volt battery clips, I/O header, reset button, and programming connector
130921: Use w/ P/N 130892, left
164726: Use w/ P/N 127693, 130892 and P/N 159775, left

164726

Part No.	Parallax No.	1	10
130921	27120	$22.95	$20.95
164726	27130	48.95	46.55

Parallax's "Stamps In Class" Series Kits
Enabling Students to "Micro-Control" the World

Learn BASIC Stamp programming essentials from the experts. Each kit combines an educational book with the components needed to cover robotics, process control and microcontroller interfacing. The program emphasizes creative PBASIC programming in the classroom. For use with the "Board of Education" below.

Robotics

Build a BOE-BOT by adding a chassis, servo motors, power supply, and proximity sensor to your Board of Education (right). Experiments cover basic programming and servo control, sensor interfacing using an infrared LED and receiver, light following, and communication between BOE-BOTs.

- Experience: moderate • 84 piece kit with book
Requires: BS2 starter kit (P/N 140071, see website)

Part No.	Parallax No.	1	10
170131	28154	$115.95	$104.95

Earth Measurement Kit

Created as a subsequent test to the "What's a Microcontroller?" guide. Topics introduced in this series are closed-loop feedback control systems, serial communications, use of the BASIC Stamp's EEPROM, calibration sensors, conductivity in water and the use of a sound transducer for human feedback.

Part No.	Parallax No.	1	10
202307	28153	$68.95	$61.95

In-System Programming Kit

This unique development tool programs Scenix SX chips in-system & performs in-circuit source-level debugging. Supports every Scenix Semiconductor chip that is commercially available.

See Page 5 for Microcontroller Chips

- Includes SX Key software, SX Tech Board, 2 SX 28AC/DP 50 MIPS chips, 1 Murata 50MHz resonator, printed manual, CD ROM, power supply and serial cable
- DB-9 serial connector connects to RS-232 port using serial cable
- 4-pin connector on other side of tool plugs into the SX's Vss, Vdd, OSC1 and OSC2 pins
- Windows® 95/98/NT compatible

Part No.	Parallax No.	1	10
176583	45180	$178.95	$168.95

50MIPS SX Microcontrollers

Part No.	Parallax No.	1	10
162940	SX18AC/DP (18-pin DIP pkg)	$4.95	$4.75
162931	SX28AC/DP (28-pin DIP pkg)	5.49	5.25

"Board of Education"

The BOE was designed in coordination with Parallax's educational customers to teach microcontroller programming and interfacing.

- Mechanically interlocked power supply to prevent dual connection of wall-pack and 9-volt battery
- DB9 connector for BS2-IC programming and serial communication during run-time
- P0 - P15 I/O pins, Vdd and Vss connections brought adjacent to 2" x 1-3/8" breadboard area
- Traces on top of the board show connections between BS2-IC and breadboard connections

Includes: Set of ten 10 color-coded 22 gauge wires

Part No.	Parallax No.	1	10
162536	28150	$56.95	$51.29
202331	BS2P40 adapter	24.49	21.95

Industrial Control

An educational tutorial on process control with the BASIC Stamp. High voltage methods of process control (on-off, differential gap, proportional-integral-derivative) are demonstrated.

- 34 piece kit with book • Experience: moderate

Part No.	Parallax No.	1	10
176575	28156	$49.95	$44.95

Robotic Arm Trainer Kit ▲ *109-piece kit*

Five Axis of Motion

Test your motor skills as you build and control the arm. This unit can be commanded or instructed through its five-switch wired controller with lights to grab, release, lift, lower, rotate wrist, and pivot sideways.

Arm

Controller 157366

- Max. length outwards: 14.2"
- Max. height upwards: 20.1"
- Max. lifting capacity: 4.6 oz.
- Elbow moving range @ 135°
- Grip opens to 2" wide
- Shoulder movement @ 120°
- Weight: 4.5 lbs.
- Wrist rotation clockwise or counter clockwise @ 340°
- Rotates left to right at the base @ 350°

Requires: 4 D batteries (not included)

Build It Yourself!

159345

Part No.	Description	1	10
157366	Robotic arm kit (unassembled)	$74.95	$67.49
159345	Robotic controller software (assembled)	84.95	76.49

Speech Recognition Kit & Speech Interface Kit ▲

Program the words you want the circuit to recognize, connect the interface kit to the main board and interface with the robotic arm kit. Now you can command movements to the robotic arm through speech. The heart of the speech recognition kit is the HM2007 IC wherein you can program 40 words @ 0.96 seconds word length or 20 words @ 1.92 seconds word length.

208611

Images SI Inc.

208611: Can be used independantly

Part No.	Description	Pieces	1	10
208611	Speech Recognition Kit	42	$119.95	$107.95
208629	Speech Interface Kit	41	89.95	79.95

Robotic Arm PC Interface Kit ▲ *31-piece kit*

With a PC and the software provided, you can program this interface kit for the robotic arm to do a sequence of movements at precise steps or repeat the sequence.

Includes: DB25 male to female cable & software diskette

Images SI Inc.

Part No.	Description	1	10
208637	PC Interface Kit	$69.95	$62.95

Flex Sensor

- Maximum resistance: 30kΩ to 40kΩ, proportional to the degree of flexing or bending
- Applications: virtual reality data gloves, robotic, bio-metric, physics and engineering

Part No.	Description	Nominal Resistance	1	10	100
150551	Flex sensor	10kΩ	$12.49	$11.25	$10.15

8-Pitch Gears and Gear Set

- Works with DC motors with 0.08" shaft diameter
- Heavy-duty plastic construction • Pitch: 0.125"
- **162392:** 0.15" bore to 0.070" bore
- **131801:** 20-piece gear set includes 2 each of the following: T10, T20, T30, T40, T50 and 10 bushings

162093 **162392** **131801**

SALE

∗ Prepackaged: order in increments of 10

Part No.	Mfr. Cross Ref. No.	Description	Shaft Bore	O.D.	Press Fit Shaft Dia.	Gear Dia.	1	10	100
162069	T10	10 teeth	0.151"	0.48"	0.156 (5/32)"	0.457"	$.69	$.62	$.59
162077	T20	20 teeth	0.151"	0.875"	0.156 (5/32)"	0.855"	.69	.62	.56
162085	T30	30 teeth	0.151"	1.27"	0.156 (5/32)"	1.239"	.69	.62	.56
162093	T40	40 teeth	0.151"	1.67"	0.156 (5/32)"	1.634"	.46	.41	.37
162106	T50	50 teeth	0.151"	2.07"	0.156 (5/32)"	2.016"	.69	.52	.36
162392	BUSH1	Bushing	0.075"	—	0.078 (5/64)"	0.160"	∗	.24	.22

Part No.	Mfr. Cross Ref. No.	Description	1	10	50
131801	GA1	Gear set – 20 piece (see description above)	$7.99	$7.29	$6.49

16-Pitch Sprocket Set and Chain

157075

- Operates in high humidity and corrosive environments
- Chain tension load: 2.0 lbs.
- **168276:** 14-piece sprocket set includes 1 each of the following: 8, 9, 10 teeth at ⅛" bore size; 12, 15, 16, 18, 20, 24, 30, 32, 36, 40 and 48 teeth at ¼" bore size

168276

Part No.	Mfr. Cross Ref. No.	Description	1	10	25
157075	C1227	Drive chain (12" long)	$9.95	$8.95	$7.95
168276	8890	Sprocket set - 14 pieces (see description above)	27.95	25.19	22.65

MONDO•TRONICS Flexinol Muscle Wires®

These unique nickel-titanium alloy Muscle Wires® actually shorten in length when electrically powered, and can lift thousands of times their own weight. • Length: 1 meter

How it works… Pressing the switch lets power flow from the batteries through the Muscle Wire®, heating it and causing it to contract and raise the lever and lift the weight. When power is removed, the Muscle Wire® cools and relaxes, and the weight helps it return to its starting position.

141348: Muscle Wires® Book & Deluxe Kit
- Kit includes one each Flexinol 100, 150 and 250 Muscle Wires® (below) and Project Book • 3 meters of wire

Includes: Crimps and instructions

Part No.	Descrip.	Linear Wire Dia. (microns)	Typical Resistance (ohm/m)	Deform Current (mA)	Recovery Weight* (grams)	Weight* (grams)	Typical Rate**	Pricing 1	10
141321	100LT	100	150	180	28	150	33	$15.95	$14.39
141874	150LT	150	50	400	62	330	20	15.95	14.39
160055	375LT	375	8	2750	393	2000	4	19.95	17.95

* *Multiply by 0.0098 to get force in Newtons* ** *Cycles per minute, in still air, at 20° Centigrade*

Part No.	Description	1	10
141348	Muscle Wires® kit	$59.95	$53.95

Obstacle Avoidance Robot Kit ▲ *107-piece kit*

Six crank motion legged robot utilizes an infrared light sensing system to find obstacles and maneuvers itself aroundthem. This IR detection kit includes an infrared diode, photo diode, IC, 2 DC motors and all hardware.

Part No.	Description	Dimensions	Wt. (lbs.)	1	10
140821	Spider kit	12.0"L x 7.0"W x 3.5"H	1.2	$59.95	$53.95

MONDO•TRONICS Electric Pistons™

Deluxe 5 Pack

The Electric Piston is a shape memory alloy actuator that pulls with up to one pound of force and contracts by 20mm. Typical activation requires one volt at five amps for two seconds. Plus, mount several pistons in parallel for more strength, and in series for longer strokes.

- 1 volt @ 5 amps

Includes: Five pistons, battery, leads and plans for four complete projects

Part No.	Description	1	10
141903	Electric piston pack	$39.95	$34.95

High-Efficiency Robotic Servo

Excellent power-to-weight ratio for robotic projects.

- Supply voltage: 4.8-6 volts
- Torque: 49 oz.-in. @ 4.8V
- Speed: 16 seconds to 60°
- Size: 0.8"W x 1.4"D x 1.6"H

Part No.	Mfr. Cross Ref.	Description	1	10
157067	14500	Robotic servo	$19.95	$17.95

Giant Robotic Ball-Bearing Servo

Extremely powerful! Perfect for large robotic projects where power is a must.

- Power supply voltage: 4.8-6 volts
- Torque: 161 oz.-in.
- Speed: 19 seconds to 60°

Part No.	Description	1	10
166351	Giant robotic servo	$49.95	$44.95

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Complete Selection on our website.

Dual Adjustable Regulated Power Supply Kit

■ *48-piece kit*

Build a dual adjustable power supply for your circuits. Outputs positive-negative voltages from ±5 to ±15VDC.

- Adjustable positive and negative supplies ±5 to ±15VDC, 175mA – 750mA per supply • 120VAC input
- LED on indicator • PC board construction

Includes: Components and hardware

Part No.	Mfr. Cross Ref. No.	Dimensions	Wt. (lbs.)	1	10	25
20626	JE215	5.1"L x 3.5"W x 2.0"H	2.1 ..	**$22.95**	**$20.49**	**$18.49**
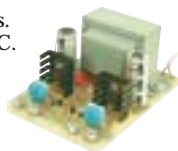
DC Motor Speed Control Kit

■ *35-piece kit*

- This kit uses Pulse Width Modulation to vary the speed of a DC motor and maintain torque
- For motors up to 100VDC/5A max.

Requires: 5-16VDC supply (recommend P/N 114825, see website)

Part No.	Description	Dimensions	1	10
127829	Motor control kit	3.6"L x 2.3"W x 1.2"H	**$19.95**	**$17.95**
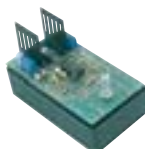
Distance and LED Kits

Parking Radar Kit ■ *55-piece kit*

Parking in tight places can be difficult, but this unit can tell you when you have come within an adjustable preset distance of the object behind you.

- Detection range: 5cm – 1.5m; angle: 5°
- Transmitter frequency: 40kHz
- PCB size: base (4.9"L x 1.9"W) sensor (3.8"L x 1.1"W)

Requires: 10-15VDC @ 16mA max (recommend P/N 100095, see website) or auto power plug (recommend P/N 115001, see website)

Part No.	Product No.	1	10	25
129120	K3502	**$44.95**	**$39.95**	**$34.95**

Ultrasonic Motion Detector Kit ■ *49-piece kit*

Detect Motion/movement from 13 to 23 ft. away and trigger an alarm with this kit.

- 2 boards: one with matched pair of ultrasonic transducers to detect motion from 13 to 23 ft. away; 2nd board contains crystal controlled oscillator and all circuits
- Switchable latch, red LED indicator
- Solder pad output to drive external relay or circuits
- Size: main board: 2.8"L x 2.0"W x 0.8"H; transducer board: 2.8"L x 0.6"W x 0.9"H

Requires: 9V battery (recommend P/N 151095, pg 59)

Part No.	Description	1	10
125090	Ultrasonic alarm kit	**$29.95**	**$26.95**

Flashing LED Kit ■ *23-piece kit*

Activates 2 flashing LEDs for applications such as model constructions. Adjustable flashing speed by potentiometers.

- 5.5" wire w/ 9V battery connector
- Minimum consumption: 4mA

Requires: 9VDC battery (P/N 151095, pg 59)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	50
147580	MK102	1.3"L x 1.4"W x 0.6"H	0.1	**$7.95**	**$7.19**	**$6.45**
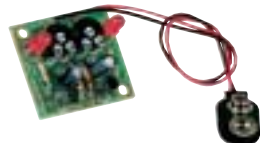
Discover More @ www.Jameco.com/Kits

LCD Development Kits

Unipolar Stepper Motor Driver Kit

■ *29-piece kit*

- Will drive unipolar stepper motors rated up to 6-30VDC @ 1.25A • Onboard 5VDC regulator
- Drives 5, 6 or 8 lead unipolar stepper motors

Part No.	Description	Dimensions	1	10
139109	Stepper motor	2.6"L x 1.9"W x 1.0"H	**$29.95**	**$26.95**

DC to Pulse Width Modulator Kit ▲ *40-piece kit*

The circuit converts a DC voltage into a series of pulses, such that the pulse duration is directly proportional to the value of the DC voltage.

- PWM range: 0 to 100%
- PWM frequency: 100Hz to 5kHz (adjustable)
- Operating voltage: 8 to 35VDC
- Min. consumption: 35mA
- Max. output current: 6.5A • Efficiency: better than 90% at full load
- Adjustable sensitivity: 2.5 to 35VDC

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
120539	K8004	3.3"L x 1.9"W x 1.8"H	0.5	**$22.95**	**$20.49**	**$18.95**

Test & Measurement Kits

Accelerometers and Interface

141591 1-Axis and 141575 3-Axis Accelerometers
- Dynamic range and excellent frequency response
- Acceleration range: ±4g • Shielded cable: 2'L pigtail

Requires: 5VDC power supply (recommend P/N 164101, pg 21)

141583: Digital Accelerometer Interface
- Measures acceleration, impact, tilt, vibration, etc.
- Simple digital interface for 1-axis and 3-axis
- Plugs into any RS-232 port @ 38.4k baud
- 200Hz max. sampling rate

Requires: DB9 male to female cable (recommend P/N 25700, pg 50)

Includes: User friendly graphical software and 9VDC @ 500mA power supply

141575

141583

Part No.	Description	Axis	Current	1	10
141591	CXL04M1	One	8mA	**$99.95**	**$89.95**
141575	CXL04M3	Three	24mA	249.95	219.95
141583	Digital interface card			249.95	224.95

Accelerometer Evaluation Boards

Dual Axis

Evaluation board for the ADXL202, dual axis, 2g accelerometer.

177308: features RS-232 interface to connect to PC serial ports. Also includes software to display real time acceleration data.

177308

Part No.	Product No.	Description	1	10
177287	ADXL202EB	Dual axis	**$49.95**	**$44.95**
177308	ADXL202EB-232	w/ RS-232	119.95	107.95

PRECISION NAVIGATION, INC. Vector 2X Compass Module

- 2° accuracy, 1° resolution • 3-wire serial output format
- Hard iron calibration • 5Hz sampling rate
- Pin selectable BCD or binary output format

Requires: Power supply 5V @ 10mA (recommend P/N 112070, see website)

Part No.	Description	1	10	25
126703	Vector 2X module	**$49.95**	**$44.95**	**$39.95**

Function Generator Kit ■ *21-piece kit*

Sine, Triangle and Square Wave

Great for prototyping electronic circuits. Produces waveforms at frequencies continuously variable from 1Hz to 100kHz.

Requires: 12VDC supply or ±6VDC split supply (recommend P/N 20626, above)

Part No.	Mfr. Cross Ref. No.	Dimensions	1	10	25
20685	JE2206	4.1"L x 1.5"W	**$24.95**	**$22.95**	**$19.95**

Infrared and RF Code Lock Transmitters and Receivers ■ ▲

velleman

- Use for car alarms, garage doors, door locks, lighting control, etc. • Over 8000 selectable codes
- Use several transmitters with one receiver
- Receivers feature relay contact (10A change-over or pulse contact)

Requires: Transmitter:12V battery type V23G; receivers: 12-16VDC @ 100mA (recommend P/N 100095, see website)

117655

134543

Specifications:

Transmitter	117647	117647	134543
Transmission	RF	RF	IR
Channels	2-ch	1-ch	1-ch
Range	100'	100'	23'
Experience	expert	expert	novice
Use w/ receiver	173235	117655	134551

Part No.	Description	Kit Pieces	Wt. (lbs.)	1	10
117647	K6706 2-ch transmitter (RF)	29	0.3	$16.95	$14.95
173235	K6727 2-ch receiver (RF)	75	0.5	39.95	35.95
117655	K6707A 1-ch receiver (RF)	75	0.5	29.95	26.99
134543	K6708 1-ch transmitter (IR)	16	0.3	13.95	12.49

Infrared Remote-Control Receiver Modules

- Commonly used in TVs, VCRs, audio equipment, car stereos and home computers that receive signals or data via infrared
- Single unit module which incorporates a PIN diode & a receiving preamplifier IC
- Excellent mechanical strength and electrical stability
- 940nm wavelength • Size: 0.6"L x 0.6"W x 0.5"H

131908

165008

Part No.	Description	Voltage Input	1	10	100	1000
131908	38.0kHz, side view	5VDC @ 2mA	$2.95	$2.49	$1.95	$1.49
165008	40.0kHz, top view	5VDC @ 5mA	2.95	2.75	2.25	1.95

IR LED Illuminator Kit ⬤ *41-piece kit*

- Improve low-light camcorder and CCD camera images without visible light
- 36 high powered infrared LEDs
- At 24' the beam is approximately 3.5' across

Ideal for CCD Cameras

Requires: 12-15VDC power supply (recommend P/N 114825, see website)
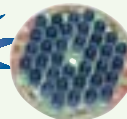
Part No.	Description	Dimensions	1	10	25
157964	IR illuminator kit	2" Dia.	$16.95	$15.29	$13.75

15-Channel Infrared Transmitter & Receiver ■

- Applications: remote on-off switch, alarms, garage door opener, etc.
- 15 independent channels • Transmitter/receiver range: ±30 meters

120555 Transmitter: Requires: 9VDC battery. (recommend P/N 151095, pg 59)

120547 Receiver: • Each output can be a change-over or pulse contact switch
- Output: 50VAC @ 500mA max. • PCB dimensions: 2.8"L x 5.7"W

Requires: 8-14VDC (recommend P/N 100095 or 129314, see website)

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120555
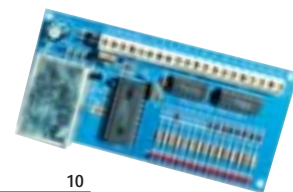
120547

Part No.	Description	Kit Pieces	Weight (lbs.)	1	10
120555	K6710 15-channel transmitter	37	0.8	$64.95	$58.39
120547	K6711 15-channel receiver	76	0.5	44.95	39.95

Audio Transmitters, Amplifier and Speech Recognition Kits

FM Stereo Transmitter Mini Kit ■ *37-piece kit*

Run your own FM radio station! Plug any stereo signal into this unit and it will be transmitted to any FM radio. Tuneable from 76–108MHz. Plug in a CD player or tape deck and you have a wireless link to an FM radio within 200 feet. Clarity is approximately 40dB stereo separation.

Requires: 9VDC power supply (recommend P/N 151095, pg 59)

Part No.	Description	Dimensions	1	10
151239	FMST-100 stereo kit	2.7"L x 2.0"W	$29.95	$26.95

Universal Mono Pre-Amplifier ■ *17-piece kit*

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For audio applications with insufficient input signal.

- Output impedance: 1kΩ • Max. input signal: 40mV
- Frequency range: 20Hz - 20kHz +/-3dB
- Adjustable output level: 40dB max.

Requires: 10/30VDC @ 10mA power supply (recommend P/N 20626, pg 62)

Part No.	Product No.	Dimensions	1	10	25
117612	K1803	1.2"L x 1.8"W	$8.95	$7.95	$7.25

30-Watt Stereo Power Amplifier ■ *38-piece kit*

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General purpose stereo amp for audio applications.

- RMS output: dual 15W @ 4Ω or dual 10W @ 8Ω
- Frequency bandwidth: 7Hz to 60kHz (-3dB)
- Separation: 70dB
- Supply voltage: 24VCT @ 2A (recommend P/N 101864, pg 18)
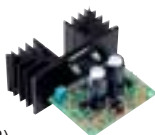
Part No.	Product No.	Dimensions	1	10	25
129138	K4003	2.8"L x 2.0"W	$29.95	$26.95	$24.49

Super Mini 2.5W Audio Power Amplifier ■ *27-piece kit*

This circuit has incredibly tiny dimensions. The IC has a pre-amplifier and power amplifier, which can be used separately by cutting a jumper.

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- Operating frequency: 60Hz to 15kHz
- Max. output power: 2.5W (4Ω, 12V)
- Short circuit/thermal overload protection

Requires: 4.5-15VDC @ 400mA power supply (recommend P/N 114825, see website)

Part No.	Product No.	Dimensions	1	10	25
127175	K2637	1.7"L x 1.3"W x 1.1"H	$11.95	$10.69	$9.65

7-Watt Amplifier Kit ■ *22-piece kit*

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- Music output power: 7W/4Ω
- RMS output: 3.5W/4Ω & 2W/8Ω
- Harmonic distortion: 0.05% (1W/1kHz)
- Frequency response: 20 to 20kHz (-3dB)
- Short circuit/overload protection

Requires: 15VDC (8-18VDC) @ 500mA power supply (recommend P/N 155803, pg 21); speakers

Part No.	Product No.	Dimensions	1	10	25
127255	K4001	2.2"L x 1.4"W	$13.95	$12.49	$10.95

◎ SENSORY Interactive Speech Recognition Kit ■

Voice Direct 364 is a speaker dependent speech recognition module, allowing training of up to 60 words or phrases in slave mode, or 15 words or phrases in stand alone.

Includes: Voice Direct 364 module, Quick setup guide, Microphone element, Speaker (2.25" Dia.,8Ω), 4 microswitches, and a passive component selection to configure the module
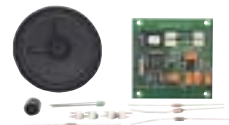
Part No.	Description	1	10
173489	Speech recognition kit	$59.95	$53.95

5 EASY WAYS TO ORDER

Telephone: Toll-Free 24 hours a day!
1-800-455-6119
International orders,
call 1-650-592-8097

24-hour Ordering Hotline!

Toll-Free FAX: US/Canada: 1-800-237-6948
Brazil: 000-817-455-6119
Columbia: 980-9-136748
Indonesia: 1-803-015-237-6948
Mexico: 001-800-593-1449
New Zealand: 080-044-0470
Other Countries: 1-650-592-2503

Online: http://www.Jameco.com
On-line catalog! Our complete
offering of over 6,000 products
searchable on the Jameco website!

Mail: E-mail your order to:
sales@Jameco.com or fill out
the order form (page 65) and
mail it to us.

In-Person: Visit Jameco at 1355 Shoreway
Rd., Belmont, CA. Will-call office
hours are 8:00 a.m. - 5:00 p.m.
Monday - Friday

CONTACT INFORMATION

The following services are available at
1-650-592-8097 Monday - Friday from
6:30 a.m. - 5.00 p.m. PST or via e-mail:
• International Sales (international@Jameco.com)
• Customer Service (custservice@Jameco.com)
• Credit Department (credit@Jameco.com)
• Technical Support (tech@Jameco.com)

Toll-Free Hotline!
Please call us at 1-800-455-6119.

A Nuestros Clientes en
La Republica Mexicana: Si usted requiere
tratar en Espanol y adquirir nuestros
productos facturados L.A.B. Cd. De Mexico
(libres de Aduana) y enviados al interior del
pais via Estafeta, contacte con nuestro
Representante y Distribuidor exclusivo;
**Proyeccion Electronica de Mexico, S.A. de
C.V**. a: General E-mail: info@proyel.com.
Quote E-mail: jmc@proyel.com
Phone/Fax: 01-(55) 5273-5029
Direccion:
Benjamin Franklin No. 166 Desp. 1
Col. Escandon Deleg. Miguel Hidalgo
C.P. 11800 Mexico, D.F.
Los demas paises de Latinoamerica: Ya
pronto tendremos servicio en su Region. Si
usted tiene alguna duda o comentario
respecto a los servicios de Jameco, contacte
con la empresa arriba mencionada en la
Ciudad de Mexico, ellos le pueden ayudar.

PRICES

Prices are effective 10/21/02. Prices and
discounts are subject to change without notice.
We are not responsible for any typographical
errors in this catalog. Photos are representa-
tive; product appearance may vary.

ONLINE INFORMATION

Get answers to frequently asked questions
on the Jameco website at:
http://www.Jameco.com

PAYMENT OPTIONS

Credit Card/Check Cards
We accept VISA, MasterCard, American Express
and Discover. No surcharge. Your account will
not be charged until your order is shipped. When
ordering, please advise name on card and credit
card billing address.

Check or Money Order
You may pay by check or money order in U.S.
funds, drawn on a U.S. bank.

Open Account
It is easy to open an account with Jameco.
Contact us for obtaining open account status.

C.O.D.
Personal checks are accepted. Please add $5.00
per C.O.D. order. Include the name and address
of your bank and your account number.

International Orders
All foreign orders must be prepaid with
a credit card (see approved credit
cards above), wire transfer, traveler's
check, cashier's check or money order
drawn on a U.S. bank in U.S. funds only.
Please do not send cash. Jameco cannot accept
letters of credit as a form of payment.
E-mail: international@Jameco.com.

SERVICES

30-Day Money Back Guarantee
If for any reason you are not completely
satisfied with your purchase, simply return
the product, in its original packaging, within
30 days for a refund, credit or exchange. Parts
returned due to customer ordering error may
be subject to a restock fee. Call our customer
service department at 1-800-536-4316 or visit
www.Jameco.com to request an RMA#. It
should appear clearly on the outside of the
box. Returns without an RMA# will not be
accepted, and no freight collect packages will
be accepted. A completed Jameco customer
service form, located on the back of the
packing slip, must be included with your
return. Books, kits, software, grab bags and
special orders are not returnable. Special
orders consist of products sold at an OEM
quantity discount or products not listed in the
Jameco catalog.

Jameco Warranty
Jameco warrants all merchandise against
defects in material or workmanship for a
period of 90 days from date of purchase unless
otherwise stated. Longer and/or broader
warranties may be provided by the manufac-
turer of a particular product. Defective items
must be returned prepaid. This warranty shall
not apply to any item where defects have been
caused by improper customer assembly, failure
by customer to follow instructions, product
modification, negligent or improper operation.

Limitation of Liability
Jameco's liability shall be limited to the repair
or replacement of defective products in
accordance with the Jameco limited warranty.
Jameco shall not be liable for any incidental,
special or consequential damages for breach of
any warranty, expressed or implied, directly or
indirectly arising out of Jameco's sale of
merchandise, including any failure to deliver
any merchandise, or arising out of customer's
installation or use, whether proper or
improper, of the product, separately or in
combination with other equipment, or from
any other cause. Products sold by Jameco are
not authorized for use as critical components
in life support devices or systems.

SHIPPING INFORMATION

Guaranteed Delivery Time for UPS Ground (Business Days)
① day ② days ③ days
④ days ⑤ days ⑥ days

Orders received Mon.-Fri. by 6:00 p.m. Eastern
Standard Time will be shipped the same day.
Orders received Saturday and Sunday will ship
the following Monday (except on holidays). If we
are unable to fill your order on the day received,
we will send you a gift certificate worth $5.00
towards your next Jameco purchase. This offer
does not apply to orders waiting for credit
approval or backordered items.

Options and Rates*

Shipping delivery times are based on working days.
Ground Service
Up to 6 working days for commercial address
(up to 9 working days for residential).
Guaranteed delivery times may vary
depending on zip code. $6.00 for 1st 2 lbs.;
$0.65 for each additional lb.
2-Day Air Service
$12.00 for 1st 2 lbs.; $1.50 for each additional lb.
Next Day Air Service
•$21.50 for AM delivery for 1st 2 lbs.;
$1.90 for each additional lb.
•$16.00 for afternoon delivery for 1st 2 lbs.;
$1.90 for each additional lb.
Priority Mail (USPS)
$4.75 for 1st lb.; $1.90 for each additional lb.
Order must be placed before 5:00 p.m. Eastern
Standard Time to ship same day.
Jameco reserves the right to rebill shipping
surcharges for customer misaddressed packages

* The above rates apply to single box shipments
that are less than 50 lbs. Please call for shipping
quote on packages greater than 50 lbs.

International Shipping & Handling
Shipping is via courier or postal service, depend-
ing on your preference, insurance availability,
and the size and weight of your package. Jameco
will apply actual shipping charges with a nominal
handling charge on all foreign orders. For mail-in
customers, please include 25% for shipping
charges or call for a shipping quotation. All
returns that meet postal requirements must be
sent prepaid via air parcel post. All courier ship-
ments to Canada and Mexico require a certificate
of origin. Jameco will provide a certificate of
origin for a $25 processing fee.

POLICIES

Confirming Orders
Please do not send confirming orders. If
company policy necessitates a confirming
order, please mark "CONFIRMING" boldly on
the first page of the order.

No Minimum Order
A $5.00 processing fee will be added to
orders under $20.00.

See page 64 for Ordering Information

Fax 1•800•237•6948   Order 24 hours/7 days a week!

Jameco, 1355 Shoreway Road, Belmont, CA 94002   Call: 1·800·455·6119   International TEL: 1·650·592·8097   FAX: 1·650·592·2503

1 **Ordered By:**
We will ship to this address unless you enter a different ship to address.

Customer No. _____ **VIP No.** (see back cover)

_____
Company

_____
Name of Requisitioner _____ Title

_____
Name of Purchasing Agent _____ Title

_____
Street Address/ PO Box Number

_____
City _____ State _____ Zip Code

Contact information (please provide all information and check method preferred)

(_____) _____
☐ Daytime phone number - Required for Credit Card Orders

(_____) _____
☐ Fax Number

_____
☐ E-mail Address

☐ Please check this box if you would not like to receive special offers via e-mail from Jameco.

2 **Ship To:** (Only required if different)

_____
Company

_____
Name _____ Title

_____
Street Address/ PO Box Number

_____
City _____ State _____ Zip Code

3 **Method of Payment:**

☐ Prepaid (check enclosed)   ☐ C.O.D. ($5.00 service charge)

☐ **Net 30 Days** (Account must be previously established. Authorized P.O. # required.)

PURCHASE ORDER NO.: _____

☐ **Credit Card**

Credit Card users only: VISA   MC   AMEX   DISCOVER

Credit Card Number ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Exp. Date: Month ☐☐ Year ☐☐☐ Name on card _____

_____
Billing Address Street/ PO Box _____ City/ State/ Zip

4

ITEM NO.	QTY.	PART NUMBER	DATA SHEETS	DESCRIPTION	PAGE NO.	WEIGHT (LBS.)	UNIT PRICE	TOTAL
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

	TOTAL WEIGHT		SUB-TOTAL	

5 **Please Check Shipping Method Below:**   AIRBORNE EXPRESS UPS FedEx Federal Express (USPS)

☐ **Priority Mail (USPS)** ....$4.75 for 1st lb., $1.90 for each additional lb.
☐ **Ground** ....$6.00 for 1st 2 lbs., $0.65 for each additional lb.
☐ **2 Day Air Service** ....$12.00 for 1st 2 lbs., $1.50 for each additional lb.
☐ **Next Day Air Service** (AM delivery).........................$21.50 for 1st 2 lbs., $1.90 for each additional lb.
☐ **Next Day Air Service** (PM delivery).........................$16.00 for 1st 2 lbs., $1.90 for each additional lb.
☐ **Foreign Shipment** via Air Parcel Post ....Shipping approximately 25% of order total. Excess fees will be refunded. Additional shipping methods available

Some restrictions may apply. See order information on page 64 for other shipping methods and conditions of sale.
Shipping rate is based on a single package shipment.

Add $5.00 processing fee on orders under $20	
Please Add Applicable Sales Tax (California Only)	
Shipping (See Item 5)	
C.O.D. (add $5.00)	
Canada and Mexico Certificate of Origin ($25)	
Credit Memo (please attach)	–
TOTAL	

6 **JAMECO** *thanks you for Your Order!*

FOR OFFICE USE ONLY
_____ / _____